



Stability Wheel Install Instructions



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Forward

Thank you for using these instructions. These instructions will guide you through the process of installing the Rehabilitation Centre for Children's (RCC's) adaptive Stability Wheels (with optional Parent Handle). The Stability Wheels can be installed on most bikes that are between 12" and 24" in size.

Care has been taken to ensure that these instructions are clear and easy to follow. If there is any confusion on a step in the installation instructions, please do not hesitate to contact us using the Contact Information below.

The operations described in these instructions are designed to be easy and safe to follow. This installation should be performed by someone with a moderate level of tool experience. The RCC accepts no responsibility for the damage or injury caused by the installation or use of the Stability Wheels.

Contact Information

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Contents

Forward	2
Contact Information	2
Warnings:	4
Bill of Materials	5
Tools needed	7
Stability Wheel Installation Instructions	8
Preparing the bicycle for installation	8
Installation Instructions	9
Installation Chart	9
Attaching the Stability Wheels to the Axle Elbow	11
Mounting the Axle Sockets	12
Mounting the Axle Elbow	13
Mounting the Frame Posts	14
Mounting the Seat Post Bar	15
Installing the Parent Handle	16
Pre-flight Check	17
Appendixes	18
Appendix A: Cutting the Frame Posts (No Parent Handle)	18
Appendix B: Revision History	20



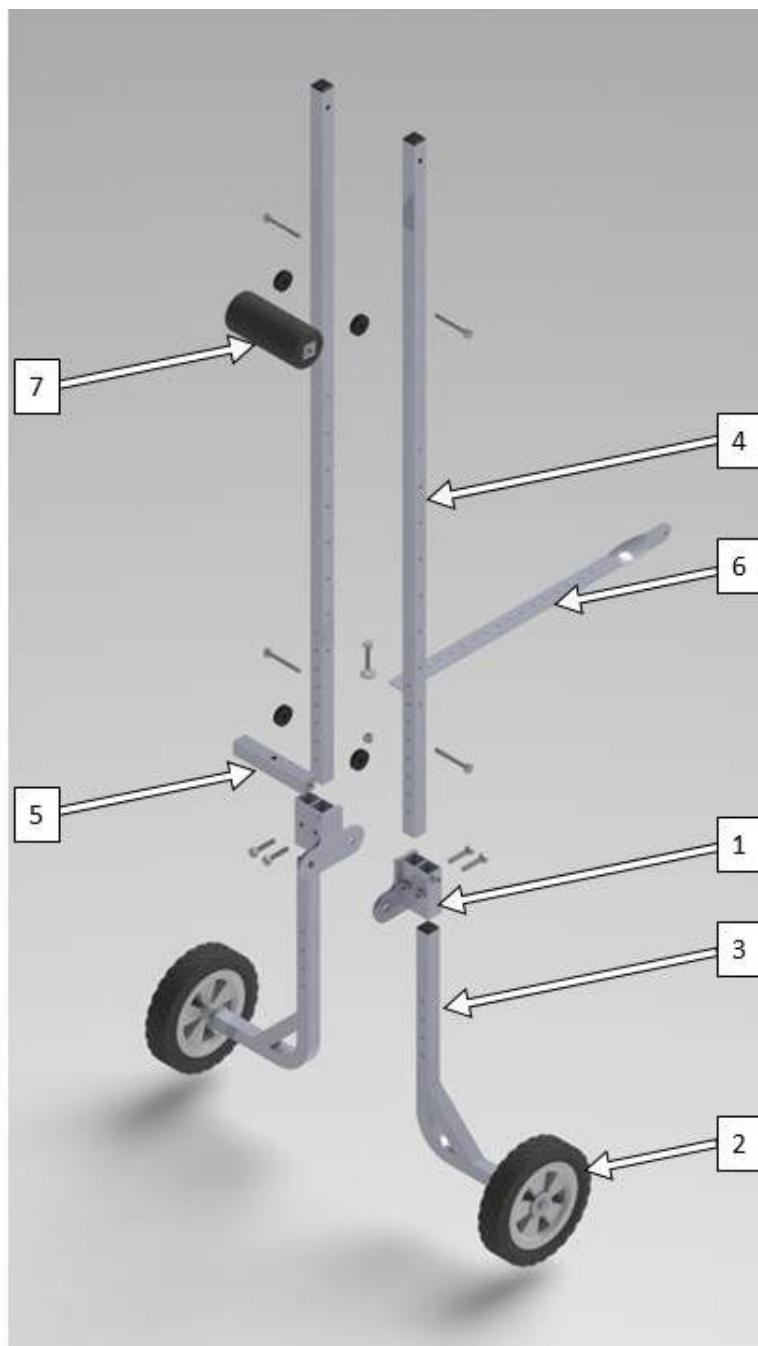
Warnings

- Installing The Stability Wheels
 - Ensure proper personal protective equipment is worn when using tools
 - Ensure that you are familiar with the use of any tools required for the installation of the Stability Wheels
- Using the Stability Wheels
 - Check for loose or broken parts before each use.
 - Always wear a helmet when riding a bicycle.
 - Even with stability wheels, bicycles may tip and fall over, especially when . . .
 - turned sharply
 - used on uneven ground



Bill of Materials

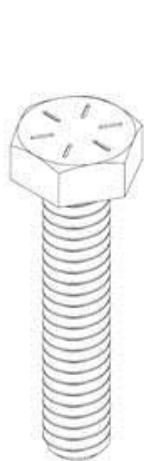
Parts



1. Axle Socket
2. Stability Wheel
3. Axle Elbow
4. Frame Post
5. Cross Bar
6. Seat Post Bar
7. Parent Handle



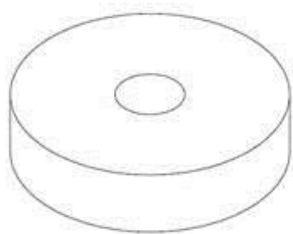
Fasteners



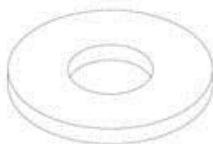
1.25" $\frac{1}{4}$ -20 Bolt (x5)



2" $\frac{1}{4}$ -20 Bolt (x4)



Acetal Spacer (x4)



Washer (x9)



Locknut (x1)



Tools needed

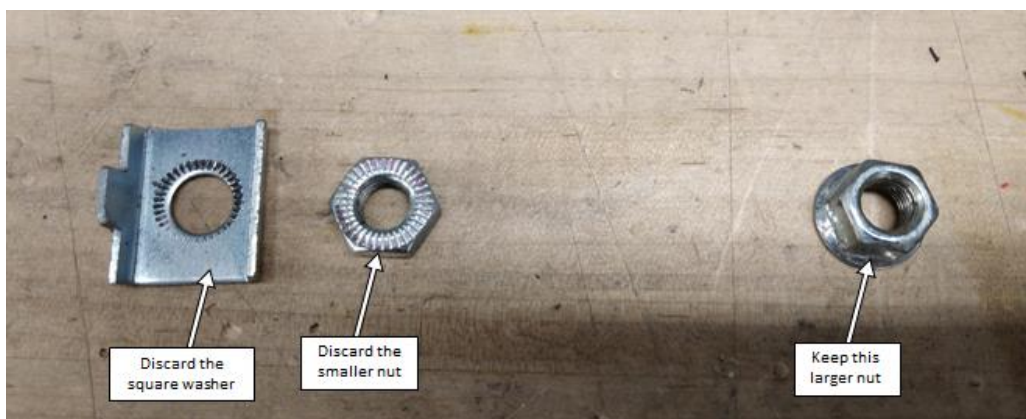




Stability Wheel Installation Instructions

Preparing the bicycle for installation

- 1) Ensure that tires are **fully inflated**
- 2) Remove any existing stability/training wheels
 - a. Many bikes (including most bikes with training wheels) come with a square, tapered washer and a larger and smaller nut on the rear axle. If your bike has these components, the **square washer** and **small nut** can be **removed** and **discarded**. The **larger nut** should be **kept** for installing the Stability Wheels later on





- 3) If your bike has a chain guard installed, remove the chain guard using the screws near the pedal sprocket and the rear axle respectively. You can then either:
- a. Discard the Chain Guard
 - i. discarding the chain guard will **not** impact the functionality of the bike



OR

- b. Modify the chain guard to not obstruct the stability wheel installation
 - ii. Cut the chain guard along the dotted lines (shown in the photo below) using a utility knife, shears or sharp scissors
 - iii. Reinstall the chain guard on the bike

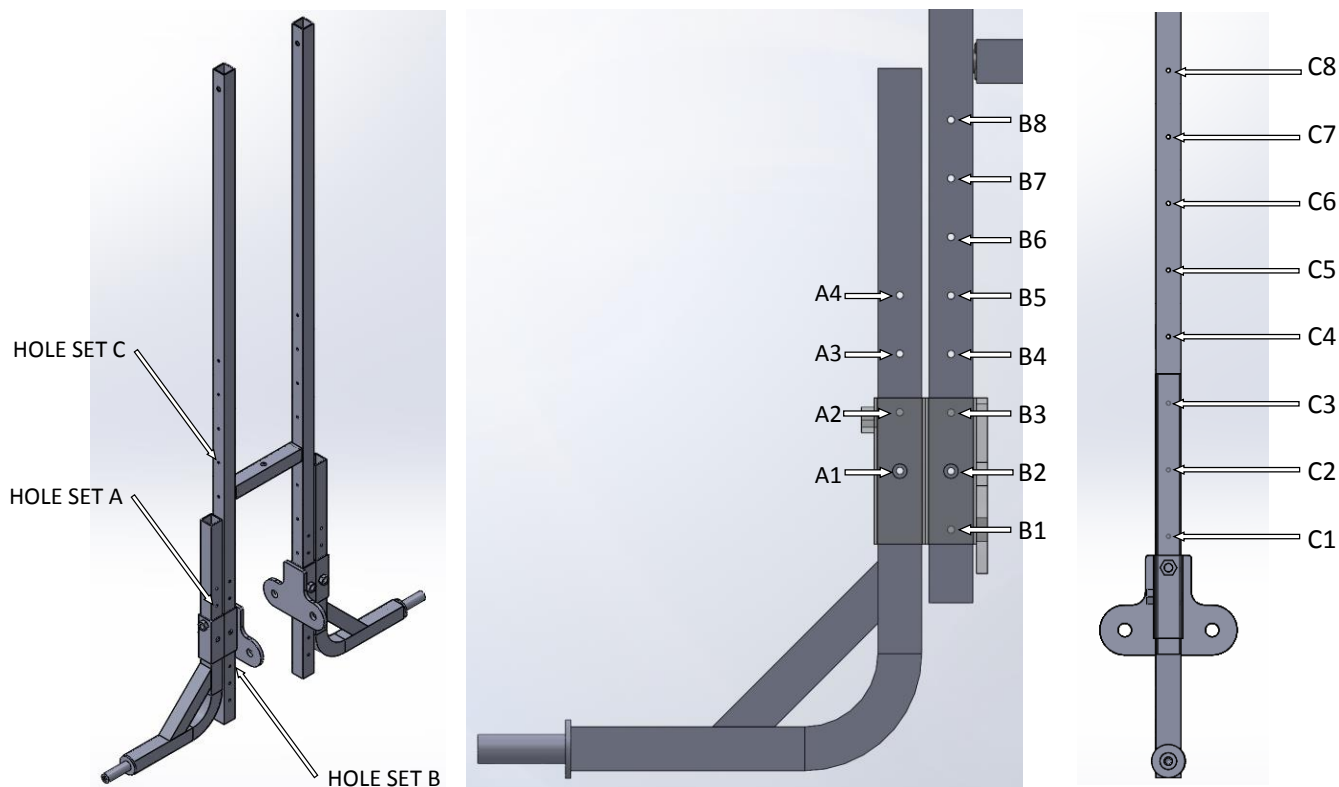




Installation Chart

This chart will be referenced frequently throughout the installation process. Make a note of which size of bike you are installing the Stability Wheels on in order to determine which settings should be used.

BIKE WHEEL SIZE (INCH)	STABILITY WHEEL SIZE (INCH)	A	B	C (SIDE HOLES)
24	10	4	8	8
22	10	3	7	7
20	8	3	6	6
18	8	2	5	5
16	8	1	4	4
14	6	1	3	3
12	4	1	2	2





Installation Instructions

Attaching the Stability Wheels to the Axle Elbow

NOTE: The Stability Wheels and Axle Elbow should arrive *pre-attached*, with the Loctite and grease already applied. These instructions are included in case replacement Stability Wheels need to be installed.

- 1) Mount the *nylon* washer (not pictured in Bill of Materials) *between* the Stability Wheel and Axle Elbow
- 2) Mount the *metal* washer (not pictured in Bill of Materials) on the *outside* of the Stability Wheel
- 3) Bolt the Stability Wheel to the Axle Elbow using a 3/4" long 1/4-20 bolt (not pictured in Bill of Materials)
 - a) A product such as Loctite (not included) should be used to ensure that the bolt does not come loose
- 4) Optional: Grease axle to improve rotation (grease not included)



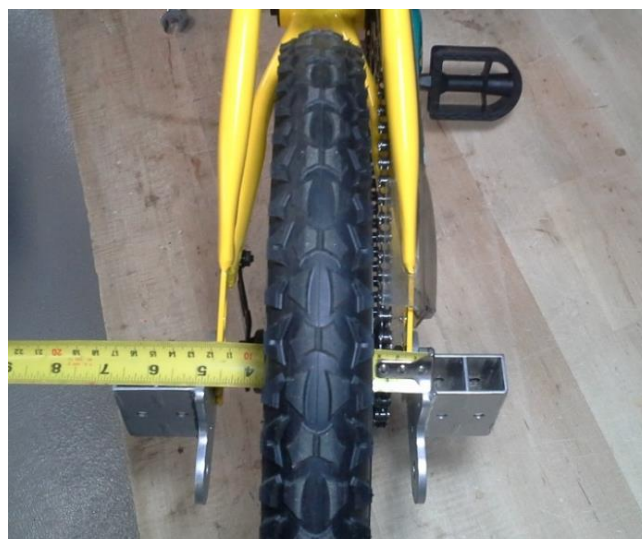


Mounting the Axle Sockets

- 1) Mount the Axle Socket on the rear axle of the bike in the orientation shown below
 - a) Use the *larger* nut which came with the bike to attach the Axle Sockets to the axle
 - b) Before tightly fastening the nuts onto the Axle Sockets, line up the bottom edge of the axle socket approximately with the rear fork bar (along the dotted line shown in the photo below)
- 2) Measure and record the distance between the Axle Sockets using the tape measure. The distance should be approximately 5" (+/- ¼")



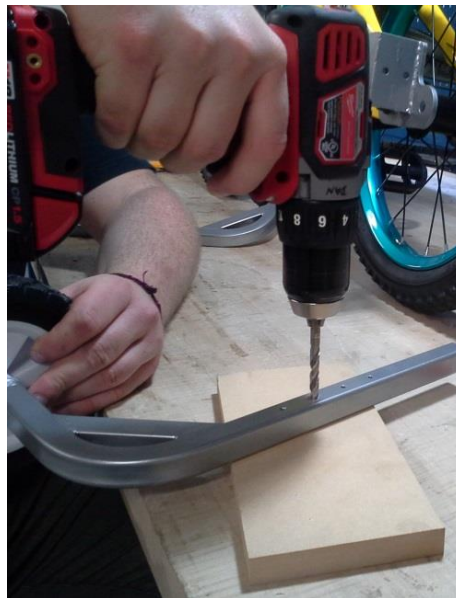
TIP: It may be helpful to flip the bike upside down to work on while installing the Axle Sockets, as this orientation allows the bike to stand freely





Mounting the Axle Elbow

- 1) Line up the hole in the Axle Socket with the hole in the Axle *Elbow*
 - 4) Refer to the Installation Chart to determine the correct hole from set 'A' to use based on the bike size
- 2) Mark the selected hole from set 'A' on the Axle Elbow with the sharpie and chase it with a ¼" drill bit
- 3) Use a 1.25" bolt with a washer to secure each Axle Elbow in the outermost receptacle on the Axle Socket



TIP: If it is difficult to insert the Axle Elbow into the Axle Socket, try filing off the burrs created by drilling the hole in step 2).

You may also need a mallet or hammer to insert the Axle Socket



Mounting the Frame Posts

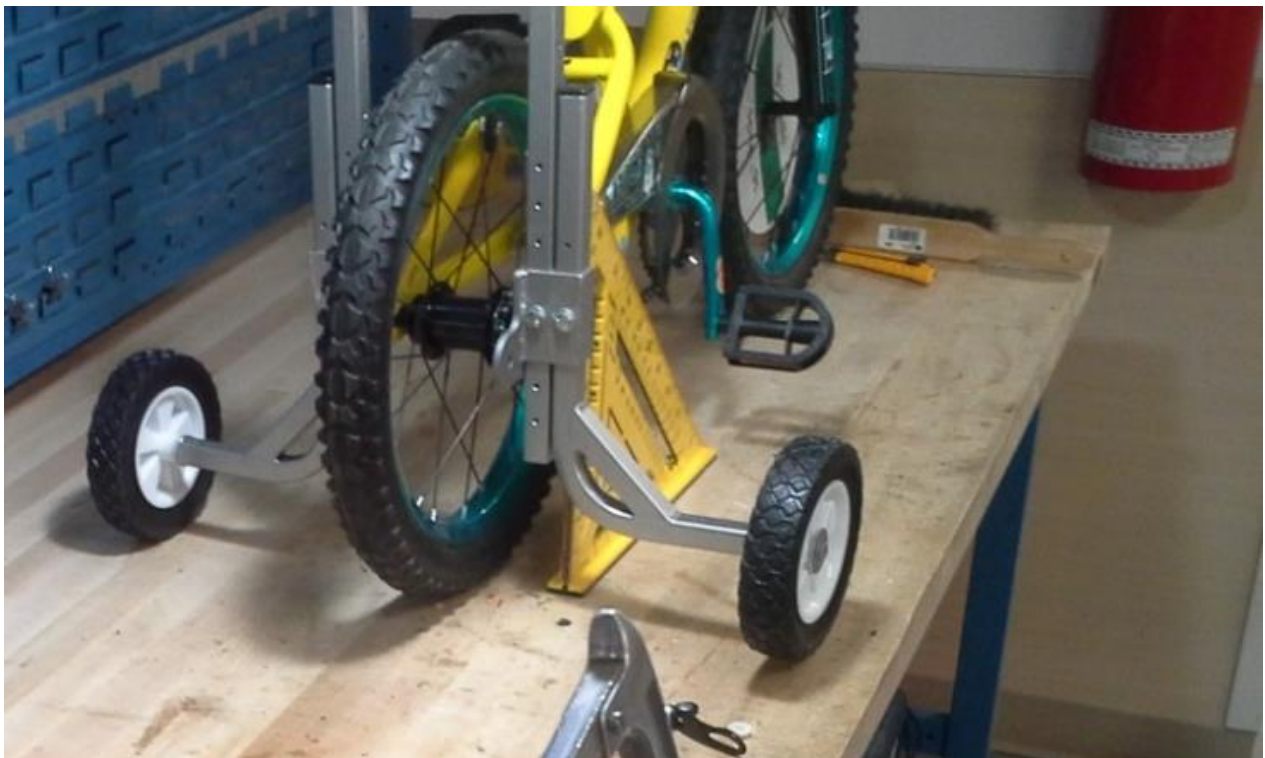
5) Refer to the Installation Chart to determine the correct holes from set 'B' and 'C' to use based on the bike size

1) Mark the holes selected in step 5) on both Frame Posts and chase them with a ¼" drill bit

ATTENTION: If the Parent Handle is **NOT** needed for this installation, proceed to Appendix A: Cutting the Frame Posts (No Parent Handle). Otherwise, continue to step 2)

2) Insert the Frame Posts into the innermost square sockets of the Axle Sockets such that hole set 'C' is facing forwards and backwards

3) Use a 1.25" bolt with a washer to attach each Frame Posts to the Axle Socket



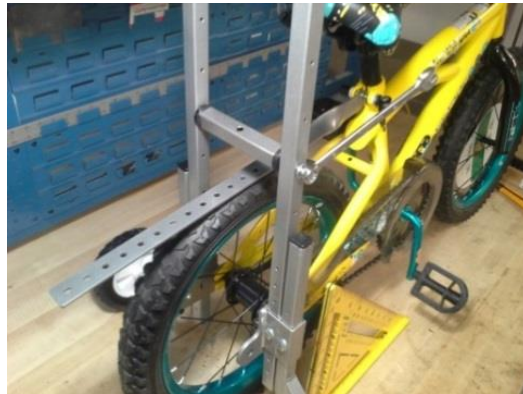


Mounting the Seat Post Bar

- 1) Mount the Seat Post Bar on the seat post bolt
- 2) Mount the Cross Brace between the two Frame Posts
 - a) Refer to the Installation Chart to determine which hole from set 'C' should be used for installing the Cross Brace, based on the bike size.
 - b) Chase the selected holes in the Frame Posts with the ¼" drill bit
 - c) Use two of the 2" bolts with a washers each to mount the Cross Brace between the two Frame Posts
- 3) Chose the correct Seat Post Bar hole
 - a) Rotate the Frame Posts about the bike's rear axle until the Frame Posts are **approximately** vertical
 - b) Match the hole in the Cross brace with the nearest hole in the Seat Post Bar
 - c) Mark the chosen hole on the Seat Post Bar

OPTIONAL: If you would like to cut the excess portions of the Seat Post Bar off, proceed to Appendix B: Cutting the Seat Post Bar. Otherwise, continue to step 4)

- 4) Use the final 1.25" bolt, a washer, and the Locknut to fasten the Seat Post Bar to the Cross Brace through the hole marked in step 3) (the washer should be *between* the head of the bolt and the Cross Brace)
- 5) Using your hands, bend the Seat Post Bar downwards until it is around 1 to 2 inches from the wheel





Installing the Parent Handle

Note: If no Parent Handle is needed and the steps from Appendix A: Cutting the Frame Posts (No Parent Handle) have been completed, proceed to the Stability Wheel Height Check section. Otherwise, continue to step 1)

- 1) Locate the topmost holes in the Frame Posts
- 2) Fasten the Parent Handle between the two Frame Posts by using the two remaining 2" bolts with the two remaining washers





Stability Wheel Height Check

- 1) Ensure that each Stability Wheel has a gap of approximately $\frac{1}{4}$ " between the Stability Wheel and the ground (Only one of the Stability Wheels should be able to touch the ground at any given time)
 - a) If either Stability Wheel is too low or too high, adjust the height setting by choosing a different setting on the Axle Elbow (hole set 'A')
 - b) The settings on the Axle Elbow are designed to fit most standard sized bikes. However, if none of the holes in the Axle Elbow allow the Stability Wheels to be set an optimum height, drill a new hole in the Axle Elbow at the desired location. Ensure that new holes are centered on the Axle Elbow and chase any new holes with a $\frac{1}{4}$ " drill bit
- 2) Ensure that **all** nuts and bolts are tight





Appendixes

Note: Appendix A and B contain **optional** instructions for further modifying the Stability Wheels to meet specific requirements. These optional operations may require tools and expertise not listed above in the main installation instructions.

Appendix A: Cutting the Frame Posts (No Parent Handle)

ATTENTION: *Only* perform the following steps if the Parent Handle is **NOT** needed. If the Parent Handle is needed, return to step 2) in the Mounting the Frame Posts section

Note: For this operation, you will need silver spray paint and a hack saw, in addition to the other tools listed in the main installation instructions

- 1) Draw a line on both Frame Posts approximately 1" above the next hole up from the set 'C' hole chosen in step 5) of the Mounting the Frame Posts section
 - a) Ex: if hole C4 was chosen, draw the line approximately 1" above C5
- 2) Cutting the Frame Posts
 - a) Clamp one of the Frame Posts in the vice,
 - b) Use the hacksaw to cut the Frame Post along the line marked in step 0
 - c) Repeat for the other Frame Post
- 3) Use spray paint to coat the newly-cut tip of the Seat Post Bar. This will prevent rust from forming on the Seat Post Bar
- 4) If available, cap the end of the Frame Post closest to the set 'C' hole with a plastic end cap

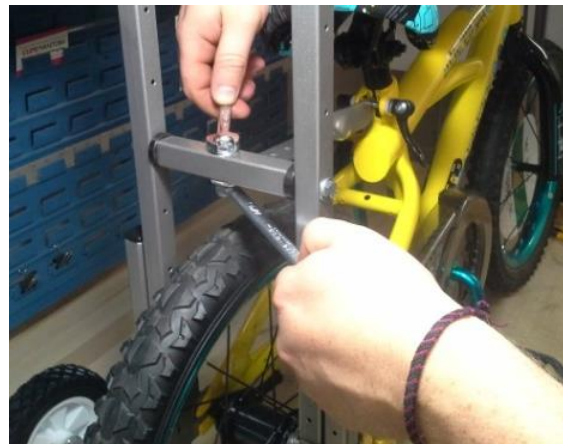
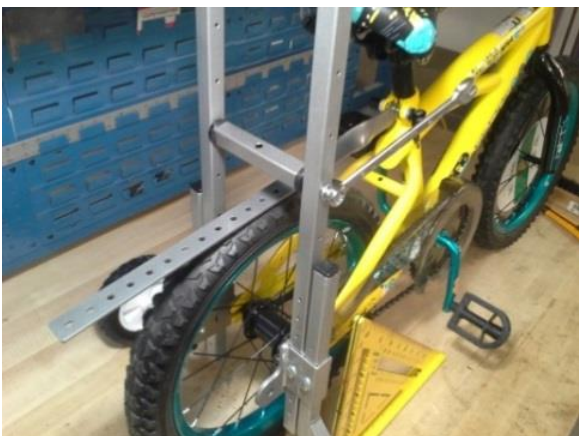
Return to step 2) in the Mounting the Frame Posts section



Appendix B: Cutting the Seat Post Bar

Note: For this operation, you will need silver spray paint and a hack saw, in addition to the other tools listed in the main installation instructions

- 1) Align the hole in the Cross Brace with the hole in the Seat Post Bar selected in step 3)
- 2) Draw a line on the Seat Post Bar to mark the rear edge of the Cross Brace
- 3) Remove the Seat Post Bar from the seat post bolt
- 4) Clamping the Seat Post Bar in a vice, use the hacksaw to cut the Seat Post Bar along the line drawn in step 1)
- 5) Use a file to remove any sharp edges from the cut in the Seat Post Bar
- 6) Use spray paint to coat the newly-cut tip of the Seat Post Bar. This will prevent rust from forming on the Seat Post Bar
- 7) Reinstall the Seat Post Bar on the seat post bolt





Appendix C: Revision History

Revision	Description	CHG	CHK	Date
1	Initial Document	JW	JW	May 1, 2019
1.1	Changed template, added more photos, revised instruction descriptions	KI	JW	July 8, 2019
1.2	Improved fidelity of photos. Improved clarity of instructions and accuracy to assembly process	KI	JW	July 11, 2019
1.3	Improved BOM. Further improved clarity of instructions and accuracy to assembly process	KI	JW	July 22, 2019