

**THIS TECHNICAL MANUAL HAS BEEN DEVELOPED FOR AND
INTENDED TO BE USED BY A QUALIFIED TECHNICIAN
WORKING FOR AN AUTHORIZED KI MOBILITY DEALER.**

Little Wave "Clik"

TECHNICAL MANUAL





WARNING: Repairs and adjustments not made by a qualified technician working for an authorized Ki Mobility Dealer can result in poor performance or failure of the device which may cause serious injury or death.

This technical manual is designed to aid in the different procedures that may be needed for the Little Wave Clik wheelchair. This technical manual does not replace, but aids the user instruction manual, adjustment guides and instructions. The procedures shown in this technical manual should only be performed by an Assistive Technology Practitioner (ATP) or clinical professional trained to do wheelchair repairs, adjustments and retrofits.

Additional information can be found in the Little Wave Clik User Instruction Manual. The user instruction manual can be found on the Ki Mobility website.

If you have any questions or concerns about any aspect of this wheelchair, this manual, or the service provided by us or your retail supplier, please do not hesitate to contact us by telephone at:

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Tools

Please see the list below to identify the tools needed throughout this tech manual. Always check tools to ensure the ends are not stripped and that the tool can perform its function properly without damaging any parts or hardware on the chair.

Tools Needed		
• 2.5mm Allen Wrench	• Two 8mm Wrenches	• 6mm Allen Wrench
• 3mm Allen Wrench	• Two 10mm Wrenches	• Utility blade
• 4mm Allen Wrench	• 13mm Wrench	• Torque Wrench
• 5mm Allen Wrench	• 17mm Wrench	• 24mm Wrench
• 5.5mm Allen Wrench	• 19mm Wrench	• Phillips Screwdriver

Frame Tube Size Guide

Tubing sizes subject to change without notice

This information is a reference for situations where the tube sizes are needed for certain attachments.

Frame Tube
Frame Tube: 1 1/8"
Camber Tube: 1 1/8"
Back Canes
Fixed Height Back Canes: 1"
Lower Back Tube: 1"
Upper Back Tube: 3/4"
Adjustable Rigidizer Bar: 7/8"
Arms
Swing Away: 1"
Upper T-Arm: 7/8"
Transfer Tube T-Arm: 3/4"
Tubular Flip Up: 7/8"
Angle Adjustable Flip Up: 1"
Footrests
Footrest Tubes: 3/4"

Spoke Tension Values

OAD Spoke	60-100 kgf
Drum brake Spoke	90-120 kgf radial side / 60-90 kgf crossed side
Maxx Spoke	60-100 kgf
Low Cost Spoke	60-100 kgf
Superlight Spoke	92-112 kgf

Chair Measurement References

The Little Wave Klik wheelchair is designed to grow with the user. See the diagram below for terms that are commonly used during the process of growing a chair and/or fitting a user with a chair.

A. Seat Width (see diagram 2)

Measured from outside of frame tube on one side to the outside of frame tube on the other side.

B. Seat Depth (see diagram 1)

Measured from the front of the back posts to the front edge of the seat sling. Seat sling starts at beginning of bend at front of frame.

C. Front Frame Bend (see diagram 1)

Angle between front seat tube and ground.

D. Sling Position (see diagram 3)

With the "0" sling position, sling is approximately 4" from the front tube. The 1" and 2" sling positions extend the frame in front of the sling by that amount. -1 pushes the seat 1" farther forward. See Charts 1 and 2 for more detail.

E. Front Seat Height (see diagram 2)

Measured from floor to top of seat tube at front of seat sling.

F. Footrest Width (see diagram 2)

Measured from inside of the front tube to the inside of front tube on the other side. Footrest width is listed below for each seat width. See Chart 1 for more detail.

G. Seat to Footrest Length (see diagram 1)

Measured from the front edge of the seat sling to top of the rear of the footrest. Footrest length of at least 2.5" shorter than the front seat height recommended.

H. Rear Seat Height (see diagram 1)

Measured from floor to top of the seat tube at the front of the back post. Rear seat height is custom to needs.

I. Center of Gravity Preset (see diagram 1)

Measured from front of back post to center of rear axle. 0" indicates the axle will be directly under the back post.

J. Rear Wheel Spacing (see diagram 2)

Measured from the outside of the seat back to the inside of the rear tire. This is adjustable up to .5" outward.

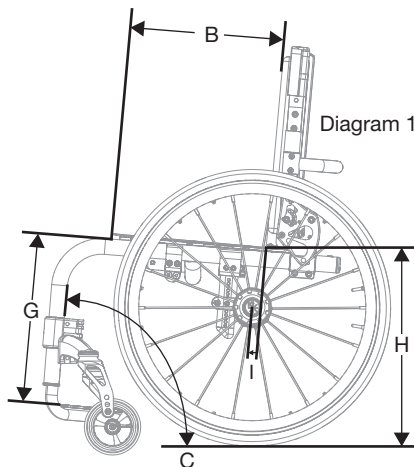


Diagram 1

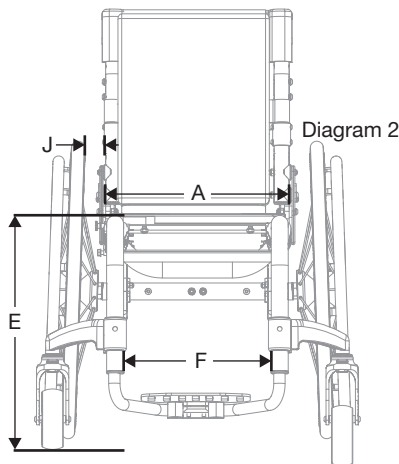


Diagram 2

F. Footrest Width		
Seat Width	Straight Frame (Diagram 1)	Offset Frame
8"	5.75"	9"
9"	6.75"	10"
10"	7.75"	11"
11"	8.75"	12"
12"	9.75"	13"
13"	10.75"	14"
14"	11.75"	15"
15"	12.75"	16"
16"	13.75"	17"

Chart 1

Sling Position / Adjustable Depth / Seat Depth Compatibility										
Sling Position		1", 0"			1"			2"		
Adjustable Depth		1"	2"	3"	1"	2"	3"	1"	2"	3"
Seat Depth	14"									X
	15"						X		X	X
	16"			X		X	X	X	X	X

Chart 2

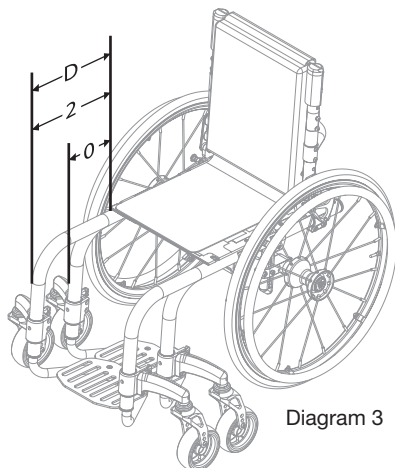
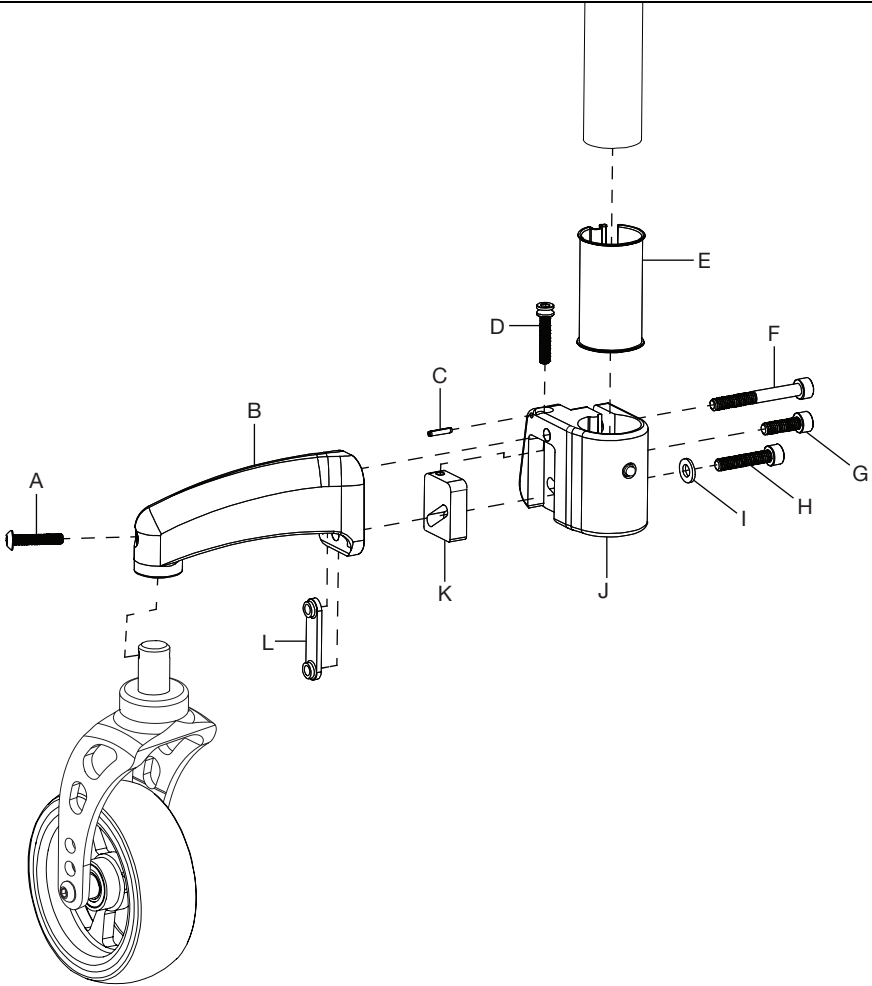


Diagram 3

Caster Mount

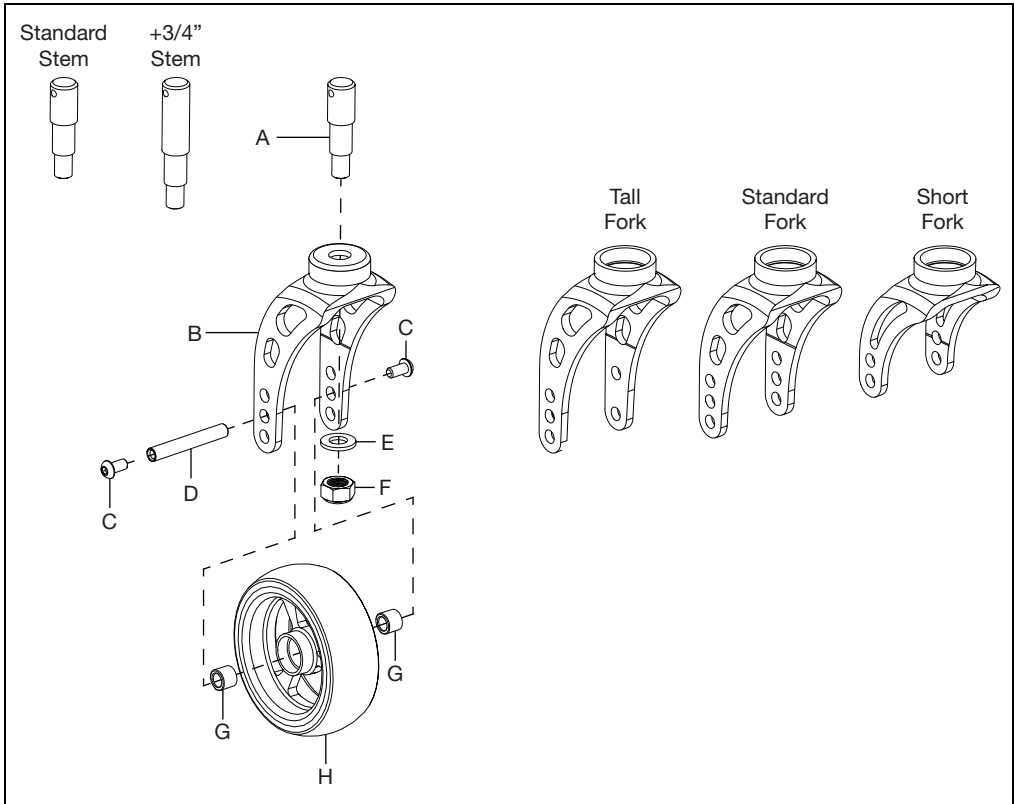
1. Install the caster wheel assembly into the caster arm (B) and secure with screw (A) using a 3mm Allen wrench.
2. Install the caster arm assembly onto the caster arm mount (J) with the adjustment plate (K) and pin (C) and slide onto the chair frame. Secure everything together with four bolts (D, F, G & H) and a washer (I) using a 5mm Allen wrench.



Caster Forks and Stems

1. Install stem (A) into fork (B) with washer (E) and nut (F) using a 17mm wrench.
2. Install caster wheel (H) into fork (B) with two screws (C), a threaded barrel (D) and two spacers (G) using two 4mm Allen wrenches.

NOTE: There are two sizes of caster stems (standard and +3/4") and three sizes of forks (tall, standard and short) that can be used. The image below shows the stems and forks. The installation process is the same for whichever stem and fork you use.

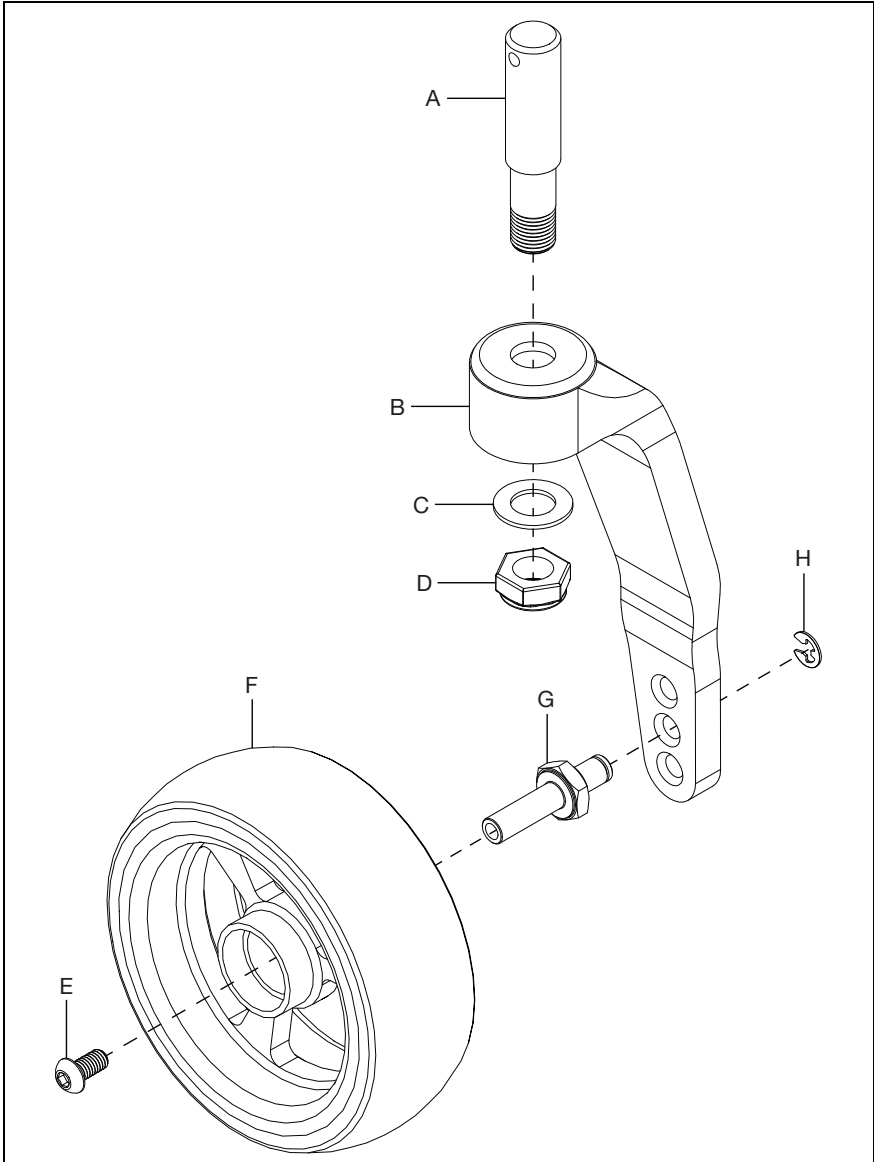


Caster Forks and Stems

Single Sided Fork

1. Install stem (A) into single sided fork (B) with washer (C) and nut (D) using a 17mm wrench.
2. Install caster wheel (F) onto fork (B) with a screw (E), the axle shaft (G) and secure with E-Ring (H).

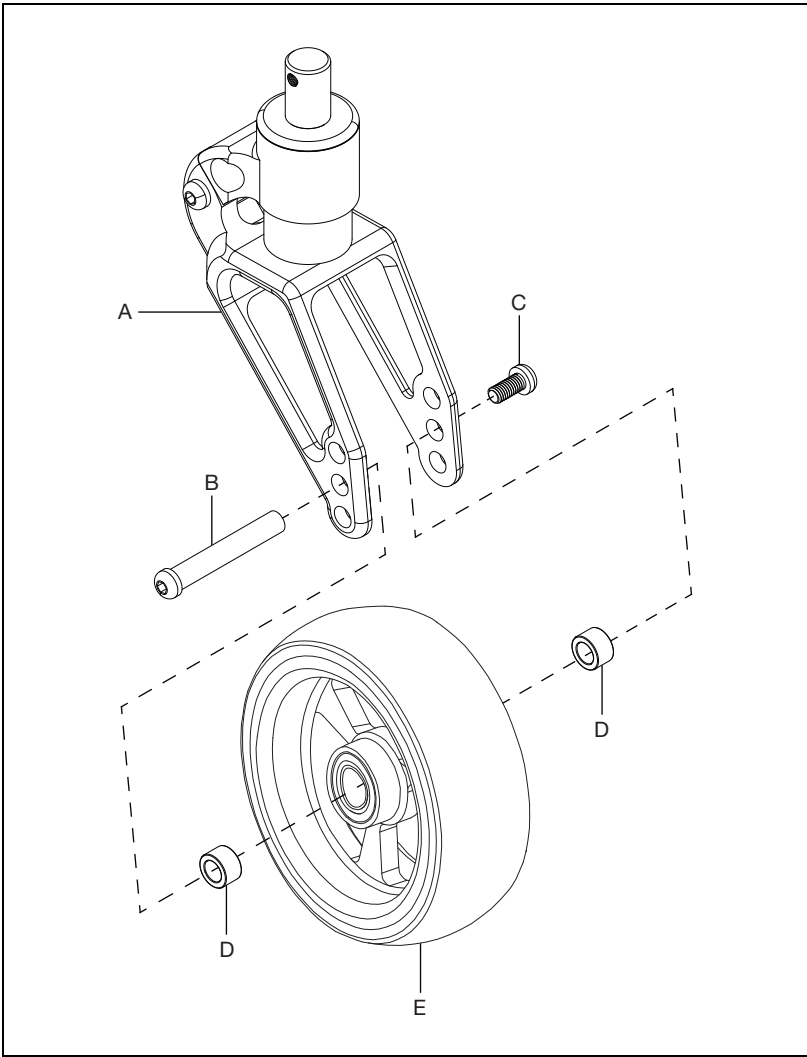
NOTE: There are two sizes of caster stems (standard and +3/4") and two sizes of forks (short and tall) that can be used. The installation process is the same for whichever stem and fork you use.



Caster Forks and Stems

Frog Legs Ultra Sport Fork Assembly

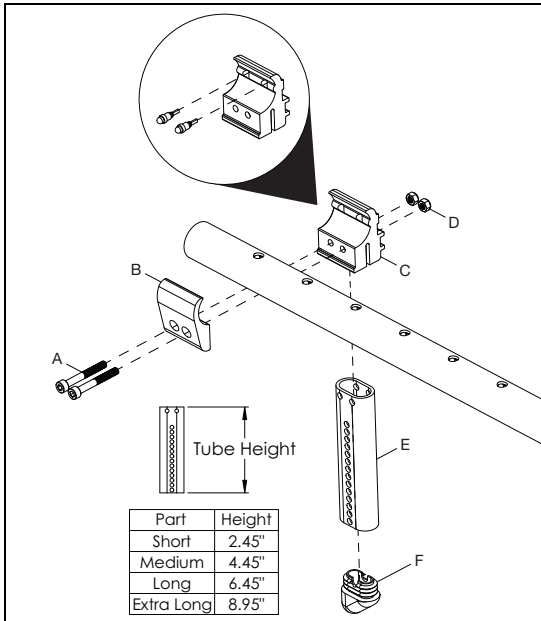
1. Install Frog Leg Ultra Sport Fork (A) onto caster wheel (E) with axle (B), screw (C) and two spacers (D) using two 4mm Allen wrenches.



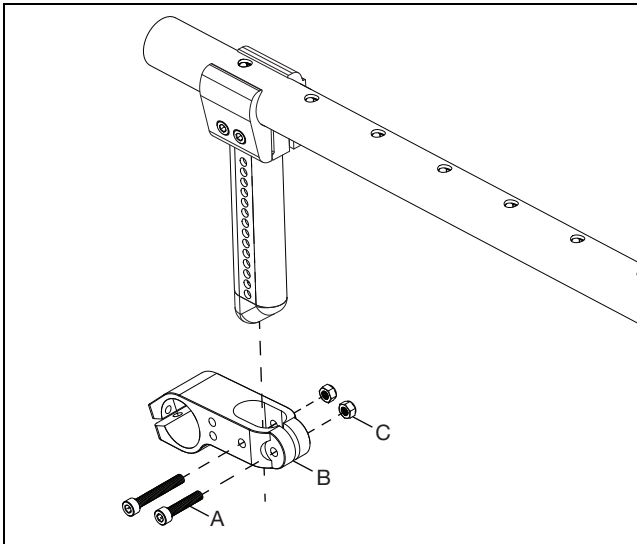
Camber Mount Assembly

NOTE: Install one side at a time so you are able to install the camber tube properly in a later step.

1. Install the tower clamps (B & C) onto the frame with the camber mount tube (E) and the camber tube cap (F) using two screws (A) and two nuts (D) with a 5mm Allen wrench.

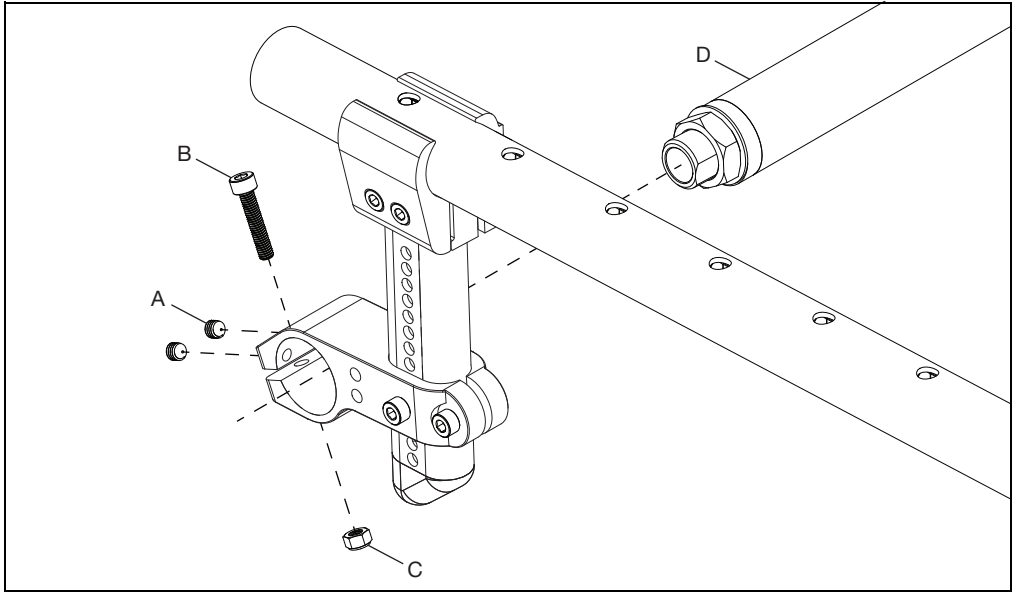


2. Install the camber tube mounting clamp (B) onto the camber mount tube and secure with two screws (A) and two nuts (C) using a 4mm Allen wrench and an 8mm wrench.



Camber Mount Assembly

3. Install camber tube (D) into the camber tube mounting clamp and secure with screw (B) and nut (C) using a 4mm Allen wrench and an 8mm wrench. Install and tighten the two set screws (A) with a 2.5mm Allen wrench.



4. Repeat steps on opposite side.

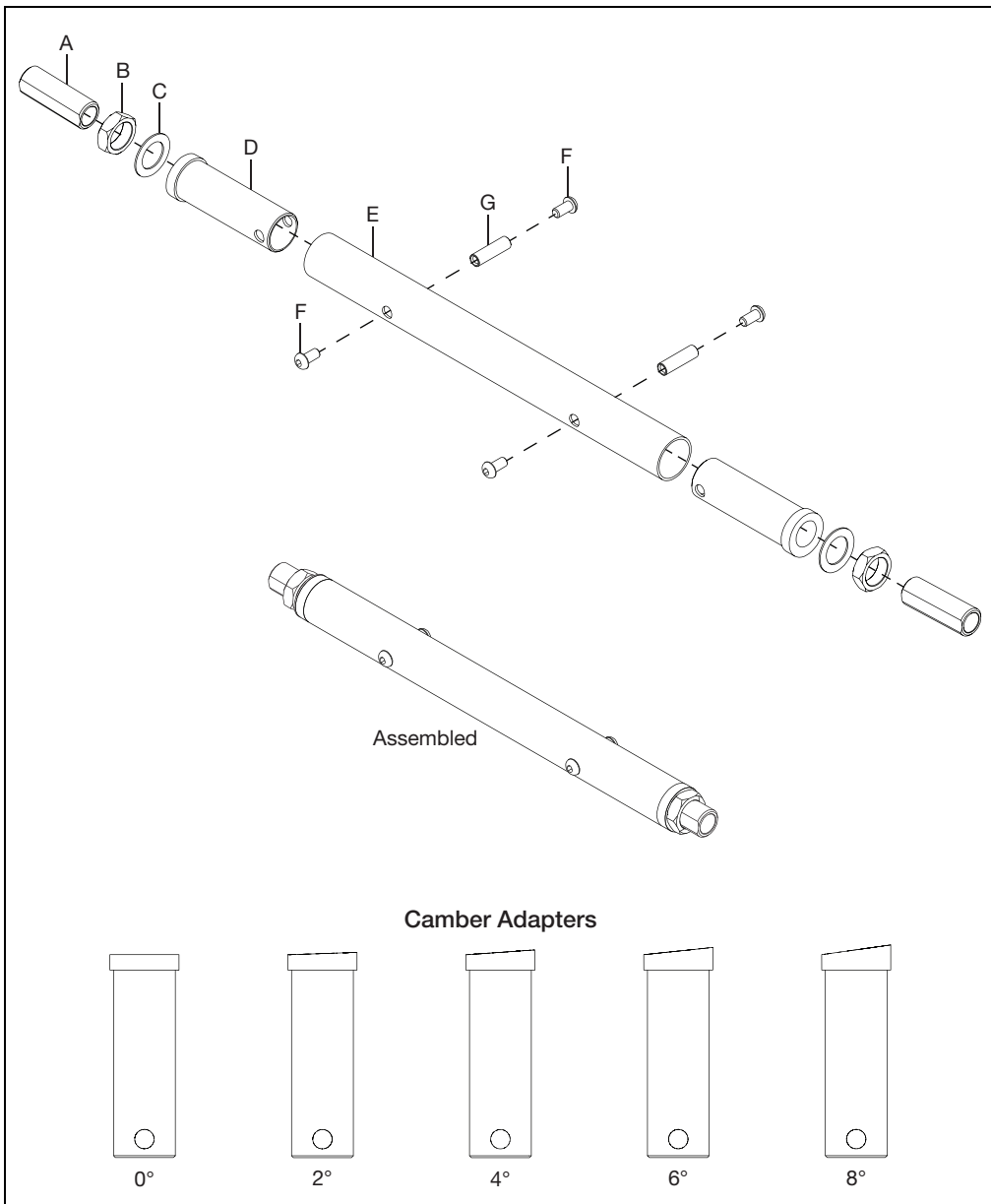
Camber Tube and Adapters

1. Install axle receiver, axle receiver nut, axle plate washer and camber adapter into the camber tube.

NOTE: The camber adapter is available with 0°, 2°, 4°, 6° and 8° camber.

2. Secure the camber adapter into the camber tube with two screws and a threaded barrel using two 4mm Allen wrenches.

3. Repeat steps 1 and 2 on opposite end of camber tube.

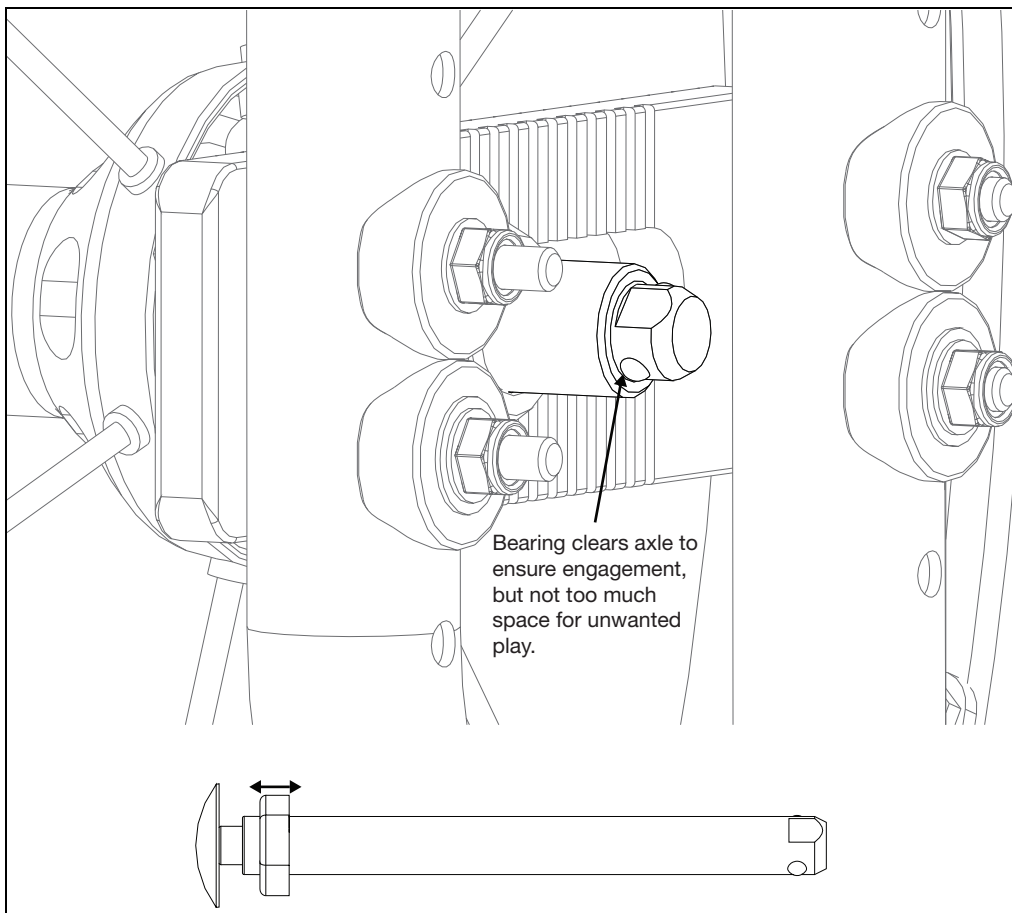


Quick Release Axle Adjustment

If the quick release axle bearing is set too long, there may be play in the wheel. If the quick release axle bearing is set too short, the bearing won't release and secure the wheel to the chair.

1. Hold the end of the quick release axle with an 11mm wrench and use a 19mm wrench to adjust the nut on the quick release axle. Rotating the nut towards the push button will increase the length and rotating the nut towards the bearing end will shorten the length.
2. Always test the quick release axle with no user in the chair first, to ensure the bearing clears and locks the axle to the frame with little play.

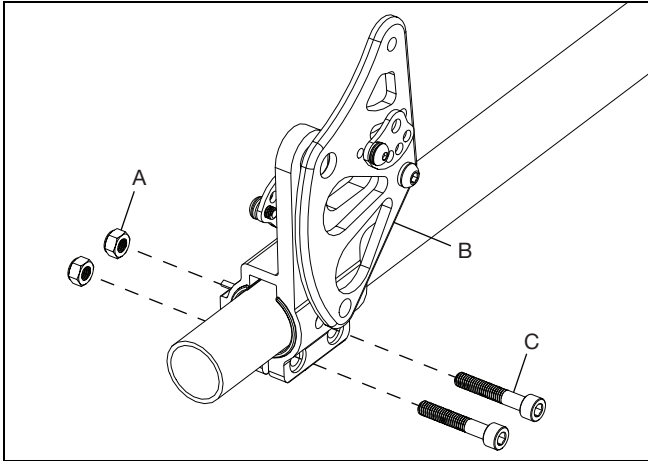
NOTE: The image below might show a different model of chair, but the image is to show the bearing clearing the axle.



Backrest Assembly

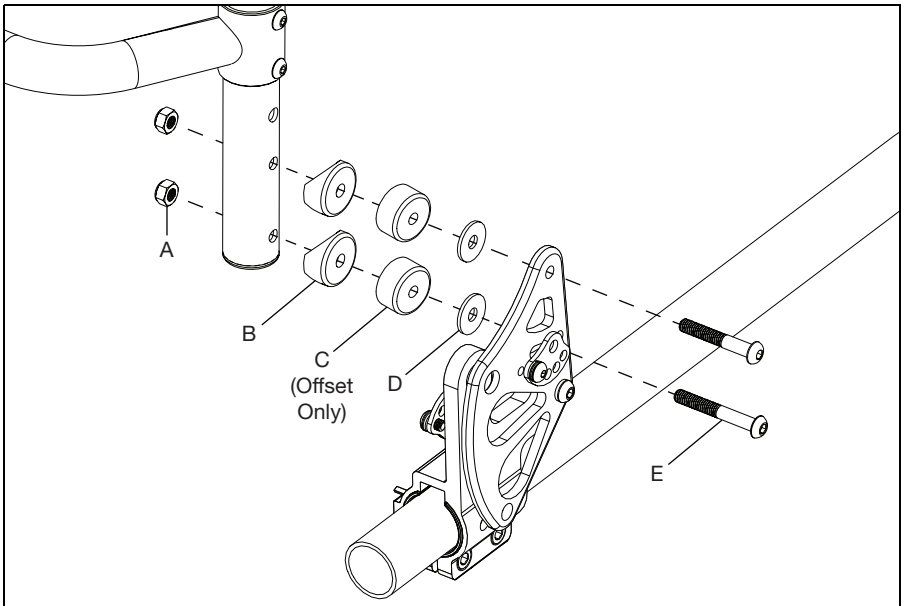
NOTE: It is important that during the backrest mount installation procedures both sides of your chair are set up the same. Take care to move assembly equal distance on each side. Each click is equivalent to $\frac{1}{2}$ ". Only once the assembly is in the desired location should you tighten any hardware to secure the position.

1. Remove current backrest mount on chair.
2. Install backrest mount assembly (B) onto frame tube with two bolts (C) and two nuts (A) using a 5mm Allen wrench and a 10mm wrench. Position on tube is based on desired seat depth. Repeat on opposite side.



3. Install the backrest onto the backrest mount and secure with two bolts (E), two washers (D), two saddles (B) and two nuts (A) using a 4mm Allen wrench and a 10mm wrench. For changing the angle of the backrest, please refer to the Backrest Angle Adjustment section in your Owner Manual. Repeat on opposite side.

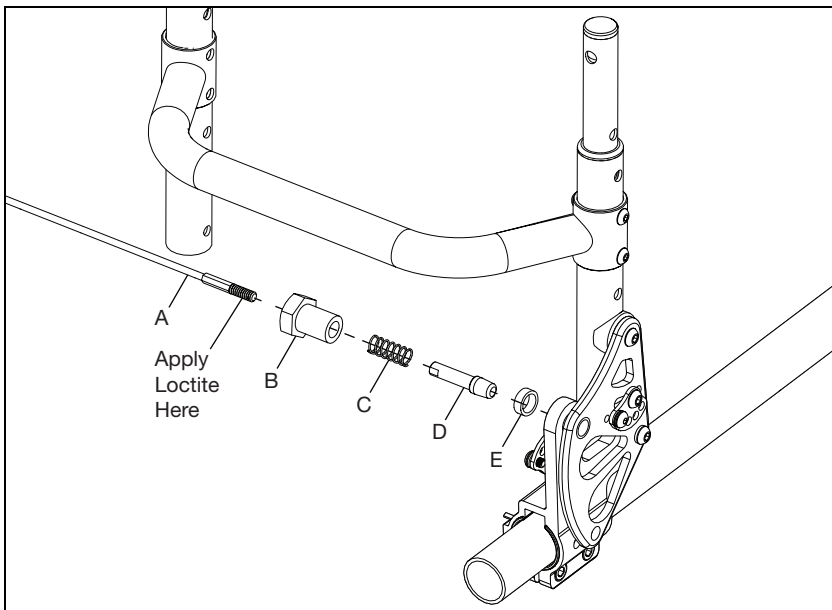
NOTE: For an offset backrest, two spacers (C) are added into the hardware.



Backrest Assembly

4. Install release cable (A) with pin receiver (B), release spring (C), lockout pin (D) and spacer (E). Use Blue Loctite on the threaded end of release cable before assembly. Repeat on opposite side.

NOTE: The spacer (E) is not used if Swing Away Armrests are being used.

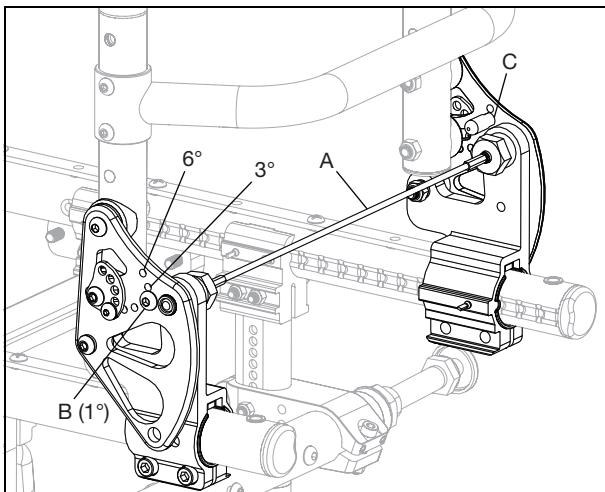


Relaxed Back

Relax Back Feature:

This chair can be adjusted for a slight recline upon releasing the back release cable (A). This is referred to as the "relax back feature." 1°, 3° and 6° are available.

To adjust, use a 3mm Allen key to disassemble the backrest stop (A & C) and reassemble in the desired position on both sides.

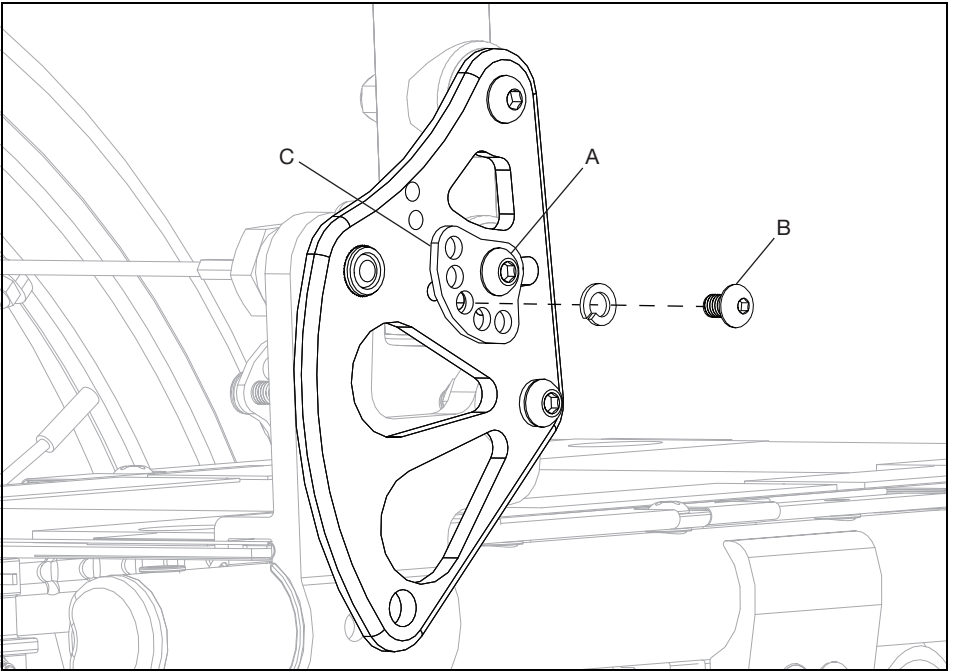


Relaxed Back

To adjust the backrest angle:

1. Loosen 6mm screw (A) on outside of backrest plate. Do this to each side of backrest.
2. Remove 5mm screw (B) on outside of backrest plate. Do this to each side of backrest.
3. Once desired backrest angle is achieved, realign holes in pivot bracket (C).
4. Reinsert 5mm screw through locating holes and tighten. Repeat on other side of backrest.
5. Retighten 6mm screw (A). Repeat on other side of backrest.

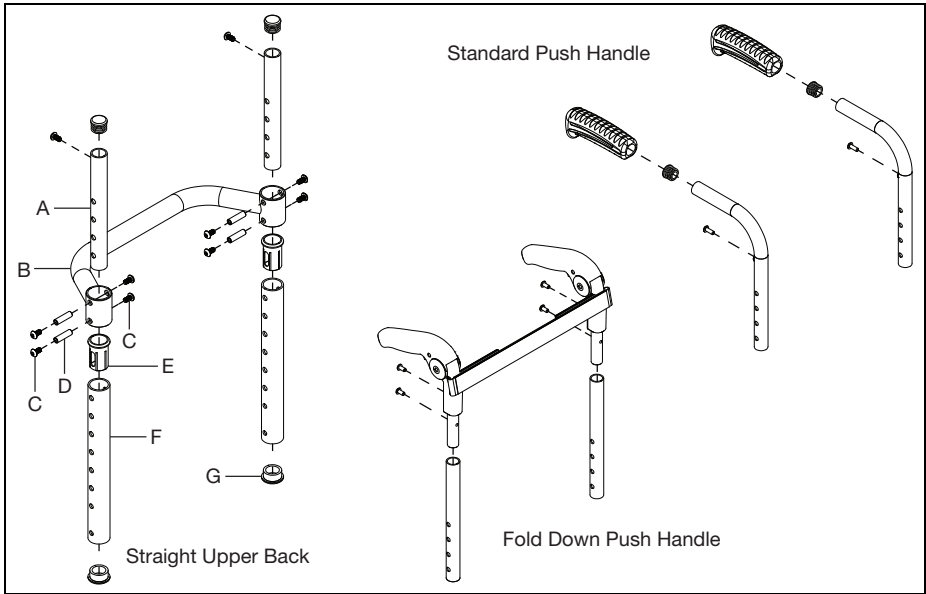
NOTE: Lowering backrest height or changing the back angle may decrease rearward stability. Always make adjustments in small increments and check the stability of your chair with a spotter to prevent a tip-over.



Height Adjustable Back Post

1. Install the height adjustable back post (F), plugs (G), sleeve (E), screws (C), threaded barrels (D) and the upper back tube assembly (A) using two 3mm Allen wrenches.

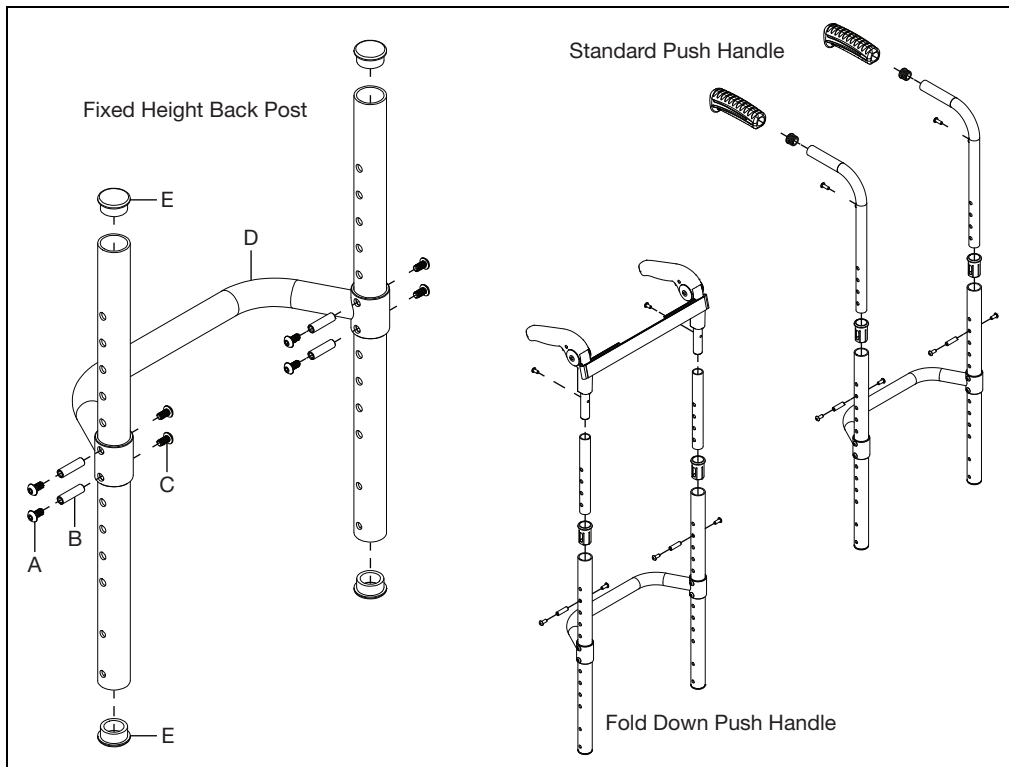
NOTE: The straight upper back, standard push handle and fold down push handle upper backs are shown in the image below.



Fixed Height Back Post

1. For the fixed height back post, install the rigidizer bar (D), screws (A & C), threaded barrels (B) and plugs (E) using two 3mm Allen wrenches.

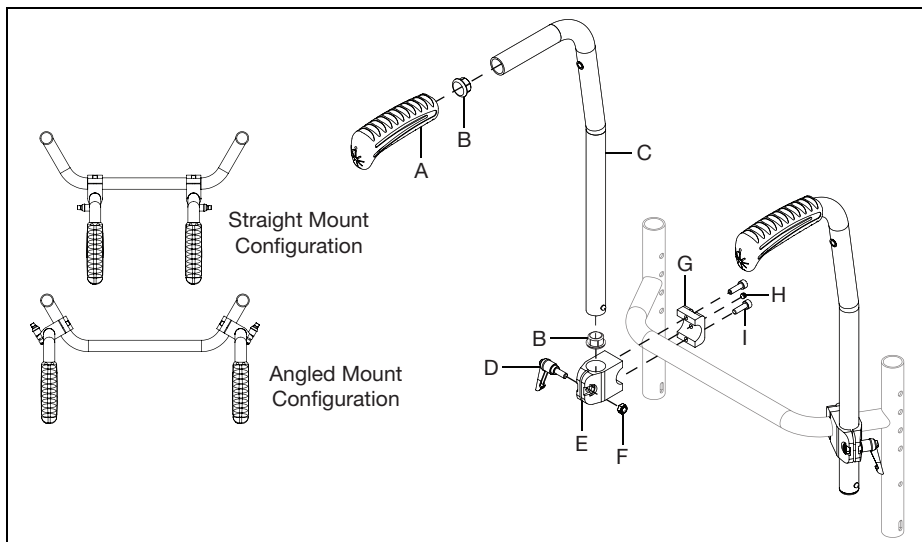
NOTE: The fixed height back post, standard push handle and fold down push handle upper backs are shown in the image below. The standard push handle and fold down push handle upper backs also require sleeves, upper post assemblies and the handle hardware. See image below for details.



Rigid Stroller Handle

1. Install the stroller handle clamp (E & G) onto the rigidizer bar and secure with two screws (I) and a set screw (H) using a 5mm Allen wrench and a 2.5mm Allen wrench. The clamps can be installed in the straight mount configuration or the angled mount configuration. See image below.
2. Install the backpost (C), with the handles (A) and plugs (B) installed, into the clamp and secure by installing the clamp handle (D) and nut (F) using a 10mm wrench.

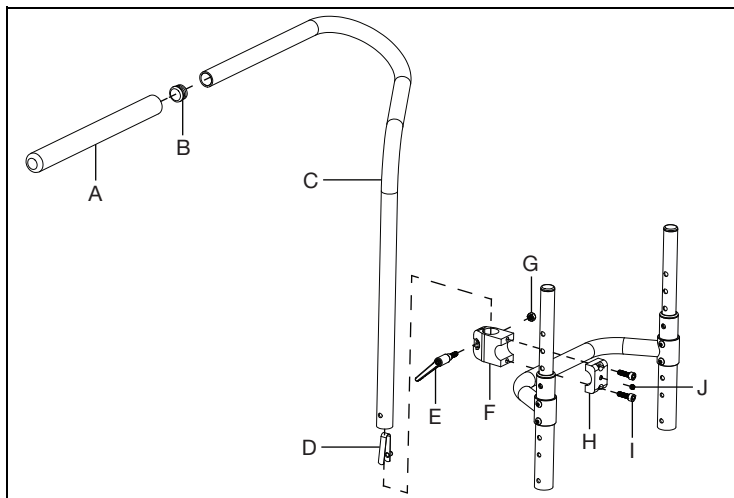
NOTE: The detent button on the bottom of the back post will click into place when properly installed.



Ergo Stroller Handle

1. Install the ergo stroller handle clamp (F & H) onto the middle of the rigidizer bar and secure with two screws (I) and a set screw (J) using a 5mm Allen wrench.
2. Install the backpost (C), with the handle (A) and plug (B) installed, into the clamp and secure by installing the clamp handle (E) and nut (G) using a 10mm wrench.

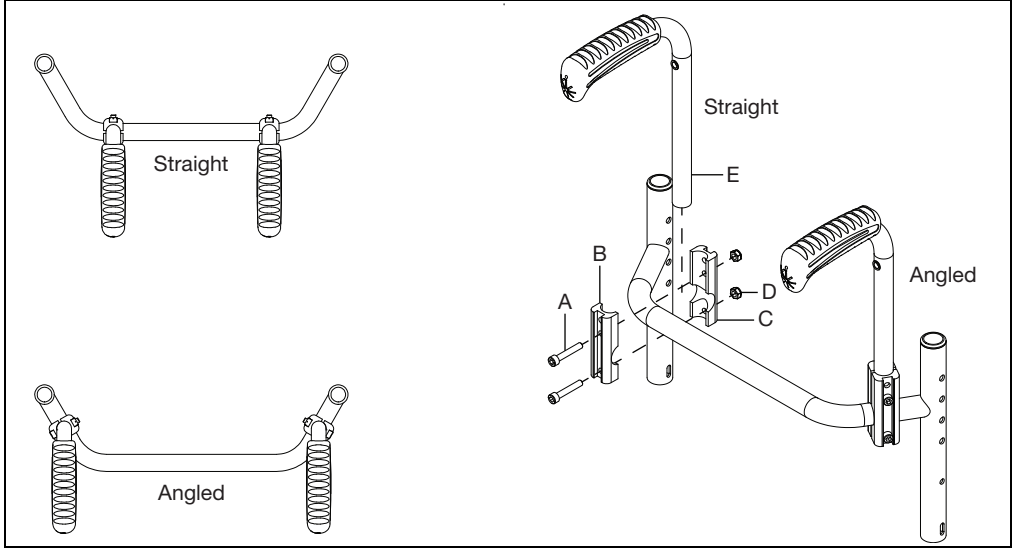
NOTE: The detent button (D) on the bottom of the back post will click into place when properly installed.



Bolt-On Push Handle

1. Install the clamps (B & C) and bolt-on push handle tube (E) onto the rigidizer bar and secure with two screws (A) and two nuts (D) using a 5mm Allen wrench.

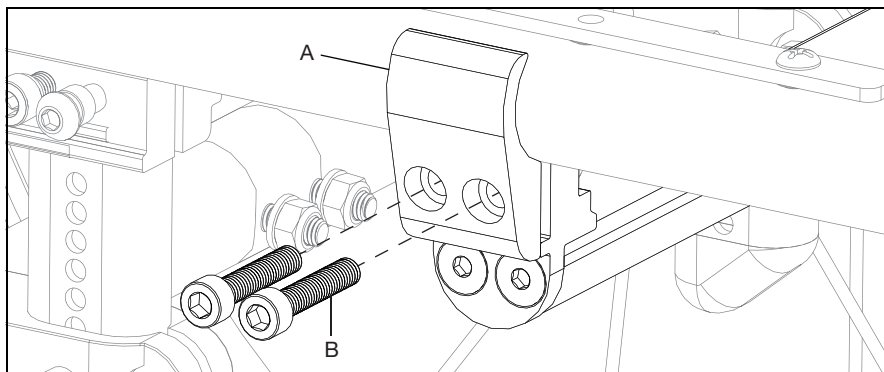
NOTE: The clamps can be installed onto the rigidizer bar in the straight or angled orientation. See image below for details.



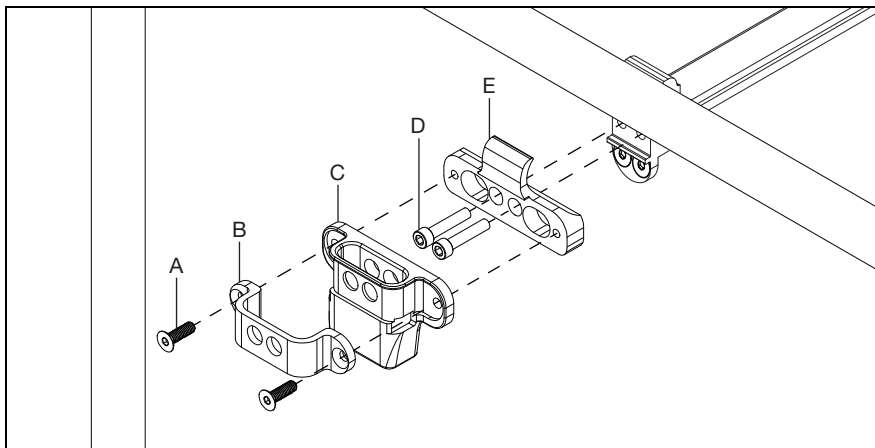
2. Repeat installation step with the second bolt-on push handle.

Height Adjustable T-Arm

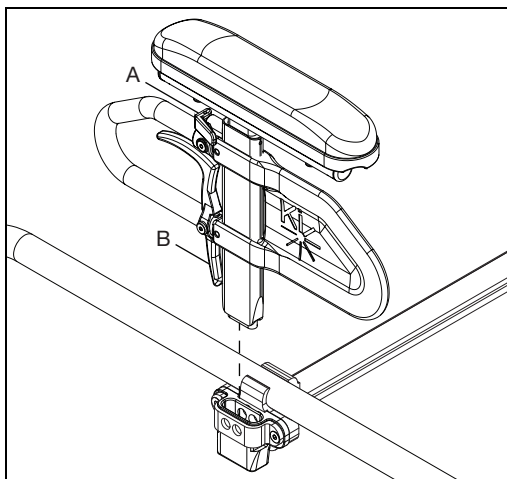
1. Remove two screws (B) and outside cross tube bracket (A) using a 5mm Allen wrench.



2. Install the T-Arm mount (E), receiver (C) and bracket (B) onto the frame and cross tube with four screws (A & D) using a 5mm Allen wrench.

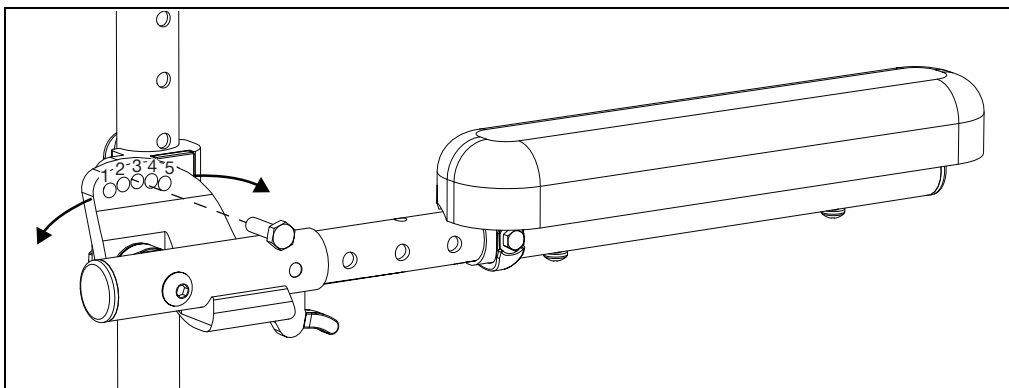


3. Install the T-Arm assembly into the receiver. Ensure the latch (B) "clicks" into place. Adjust the height by loosening the height lever (A) and sliding the T-Arm post up or down. Repeat steps on opposite side.

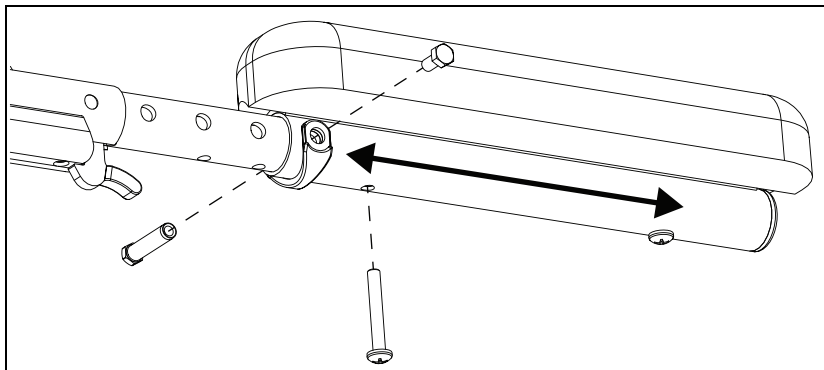


Angle Adj. Locking Flip Up Extendable Armrest

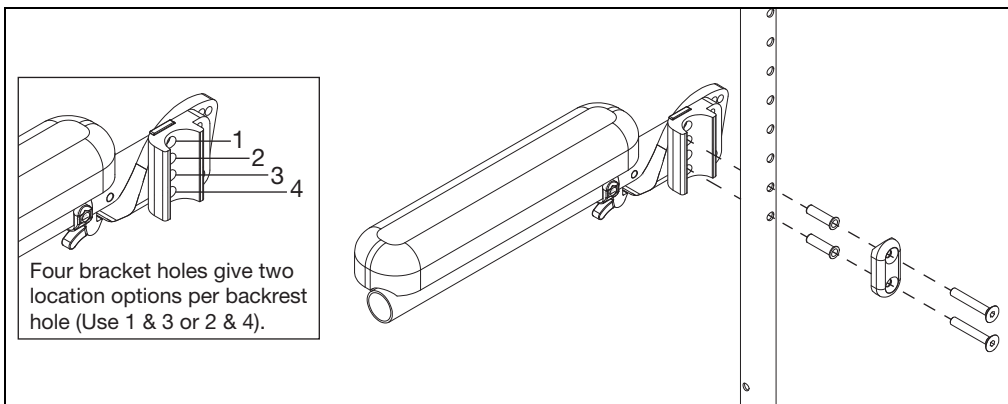
1. Set the angle of the armrest. There are five holes that can be used to set the angle. Tighten the bolt once angle is set.



2. Set the length of the armrest. To adjust the length, remove the bolts and spacer on the tube and the screw closest to the back of the chair. Slide the armrest to desired length available by the predrilled holes and reinstall the screw and bolts.



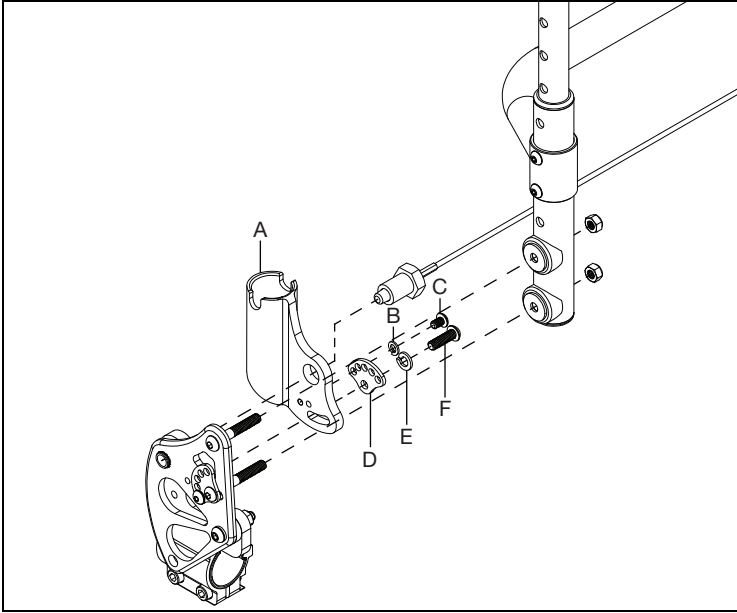
3. Set the height of the armrest. There are four holes on the armrest that allow for two different height settings for each set of holes on the back tube. Use the holes that provide the correct height setting for the user. The two bolts pass through the spacer, sleeves, back posts and into the armrest.



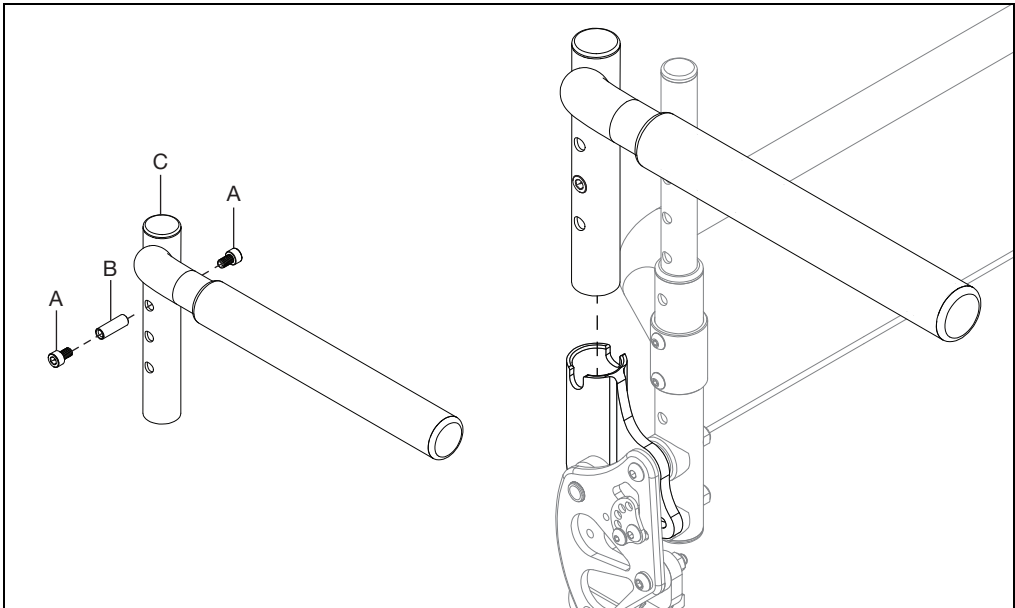
Swing Away Armrest

1. Detach the backrest from the backrest plate and install the swing away receiver (A) between the backrest and backrest plate along with arc adjustment cam (D) with two screws (C & F) and two lock washers (B & E) using a 3mm Allen wrench and a 4mm Allen wrench. See image below.

NOTE: The backrest cable will also need to be detached, put through the swing away receiver hole and back into backrest plate.

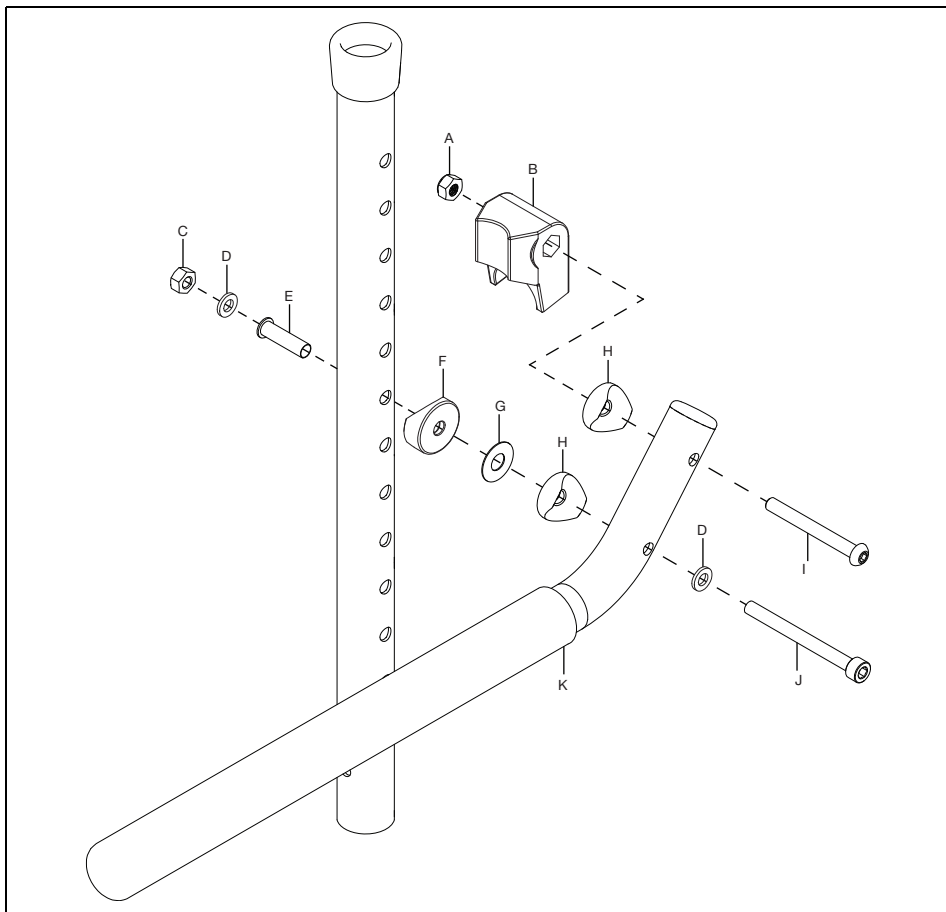


2. Install two bolts (A) and the threaded barrel (B) into the swing away armrest (C). The bolts act as stops when the armrest is dropped into the receiver, controlling the armrest height. Change height setting as needed and repeat steps on opposite side.



Tubular Flip Up Armrest

1. Install the stop block (B) onto the tubular flip up armrest tube (J) and secure with bolt (H), saddle (G) and nut (A) using a 4mm Allen wrench and a 10mm wrench. Secure the armrest tube to the backrest tube (armrest mounts on the outside of chair) with bolt (I), two saddles (E & G), washer (F), sleeve (D) and nut (C) using a 4mm Allen wrench and a 10mm wrench. Repeat on opposite side.



Canopy

Installation

1. Install tube mount (C), inner clamp (B), outer clamp (D), barrel nut (A), spherical washer (E) and bolt (F) onto backrest tube using a 5mm Allen wrench. Repeat on opposite side.

NOTE: The clamps may need to be rotated to accomodate the chair width while remaining in the correct distance for the stems. See the chart below if a different canopy size is needed.

Back Side of Chair

Completed

Front Side of Chair

A

B

C

D

E

F

Rotate clamps around back canes to achieve proper stem distance for canopy size.

Chair Width

Stem Distance

Canopy Size	Stem Distance	Available Chair Widths
Small	12"	10W - 14W
Medium	14"	12W - 16W
Large	16"	14W - 18W

2. Drop the canopy assembly stems into the tube mounts. Ensure latch catches to secure the canopy assembly in the tube mounts. For rain, ensure the fabric around the edge is folded to create the channel which catches water and dispenses it behind the chair.

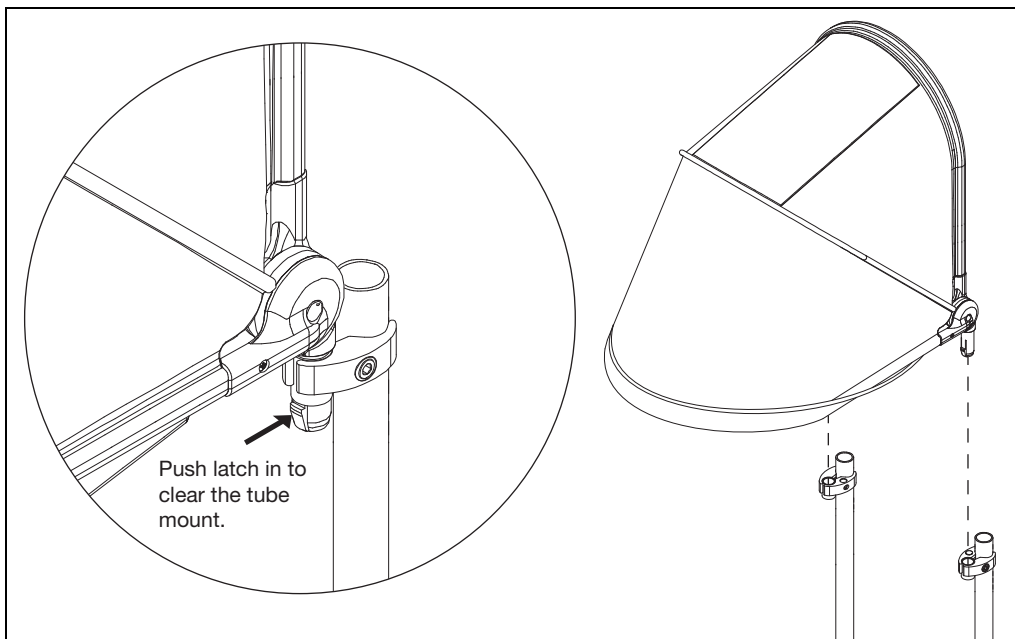
Fully Assembled

Latch catches bottom of tube mount.

During rain, the fabric channel around the edge catches water and dispenses toward rear of chair.

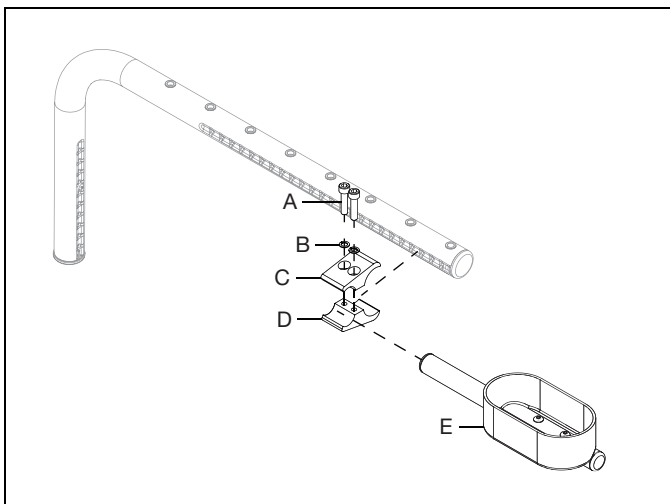
Canopy

3. To remove just the canopy, push in the latch on both stems and lift up and out of tube mount.

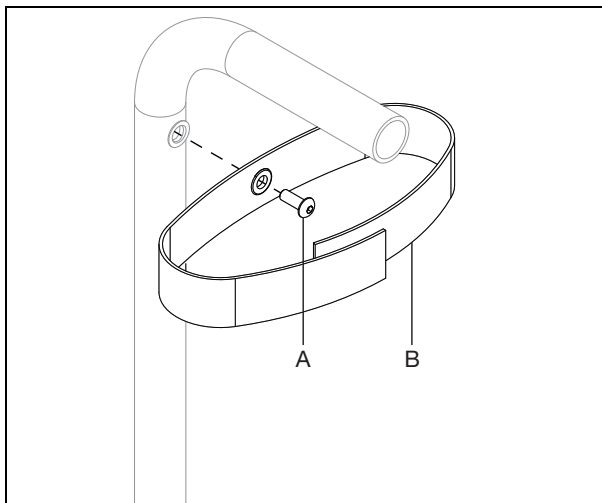


Cane and Crutch Holder

1. Install crutch holder cup (E) onto the inside of rear chair frame by securing two clamps (C & D) with two bolts (A) and two lock washers (B) using a 5mm Allen wrench.



2. Install velcro strap (B) at top of back cane with bolt (A) using a 3mm Allen wrench.



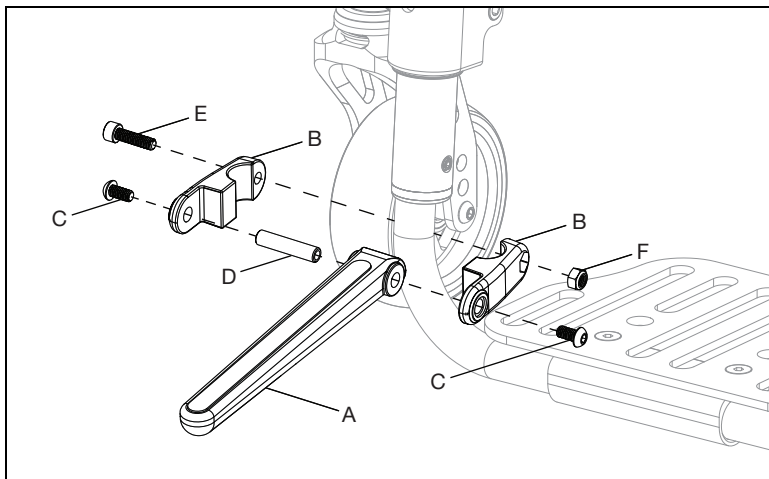
Luggage Carrier

NOTE: There are different sizes of clamps to fit all types of chairs and configurations. The carrier is mounted to the frame or footrest tube on Rigid chairs and mounted on the footrest hangers or extension tubes on Catalysts and Tilt chairs. If hangers have been omitted the carrier is mounted to the vertical front frame tube. The image below shows a luggage carrier being installed on a chair with a footrest extension. The installation is the same whether it is being installed on the frame or footrest tubes.

1. Install luggage carrier fork (A) and clamp (B) by installing two screws (C) and barrel nut (D) through the clamp and fork using two 4mm Allen wrenches.
2. Secure the clamp in the desired location by installing and tightening the screw (E) and nut (F) on the backside of the clamp using a 5mm Allen wrench.

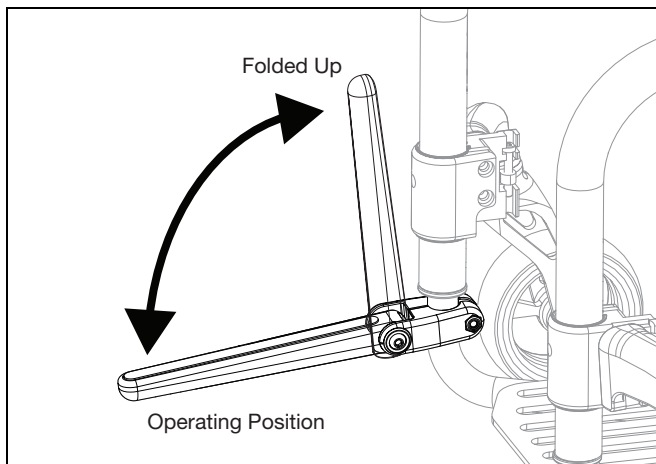
NOTE: The nut for the backside screw goes into a recess in the clamp. Ensure that nut stays in place.

3. Repeat on opposite side.



Using the Luggage Carrier

1. Operating position for the luggage carrier is when the forks are folded down (See image below). The max weight capacity is 55lbs.
2. When not in use, fold the luggage carrier up.

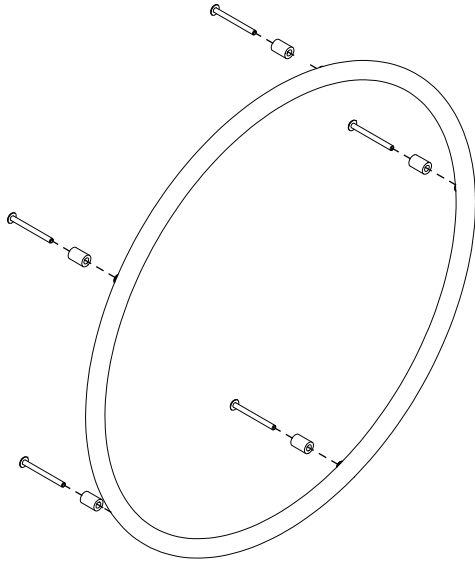


Handrim Configurations

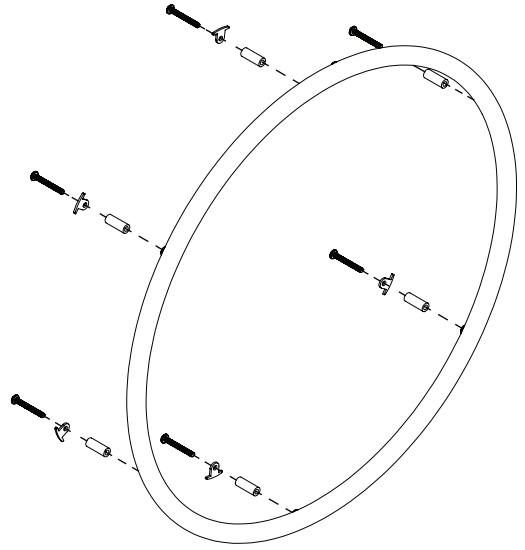
For handrim sizing, hardware and more information please visit our parts manual or click the link [HERE](#) to jump to the handrim chart.

Handrim Construction

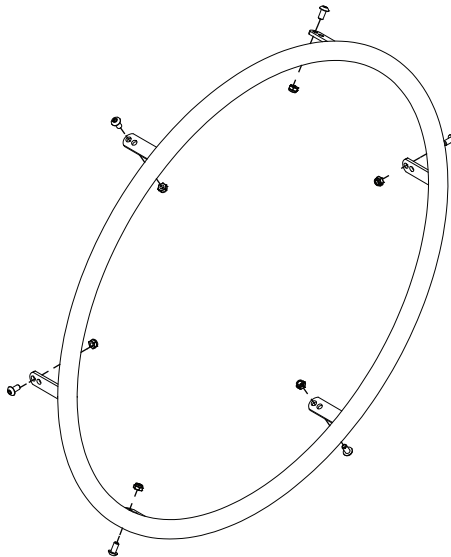
The sequencing of hardware for the three styles of handrims is shown below. The specific hardware used is determined in the chart on the previous page, based on the tire and handrim being used.



Spacer Style



Detached Tab Style



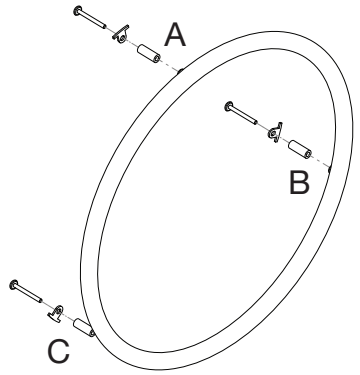
Tab Style

Handrim Tightening

The correct tightening patterns are shown below.

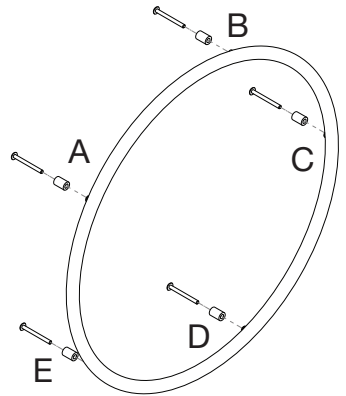
3-Hole Pattern

Use A, B, C pattern leaving A loose until C is tightened completely.



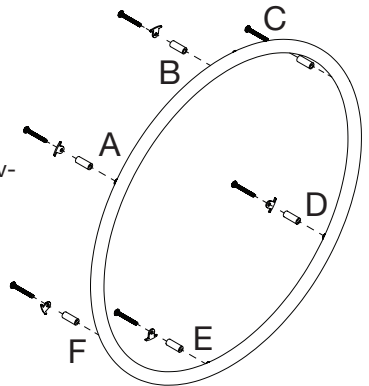
5-Hole Pattern

Use A, C, E, B, D (STAR) pattern leaving A loose until D is tightened completely.



6-Hole Pattern

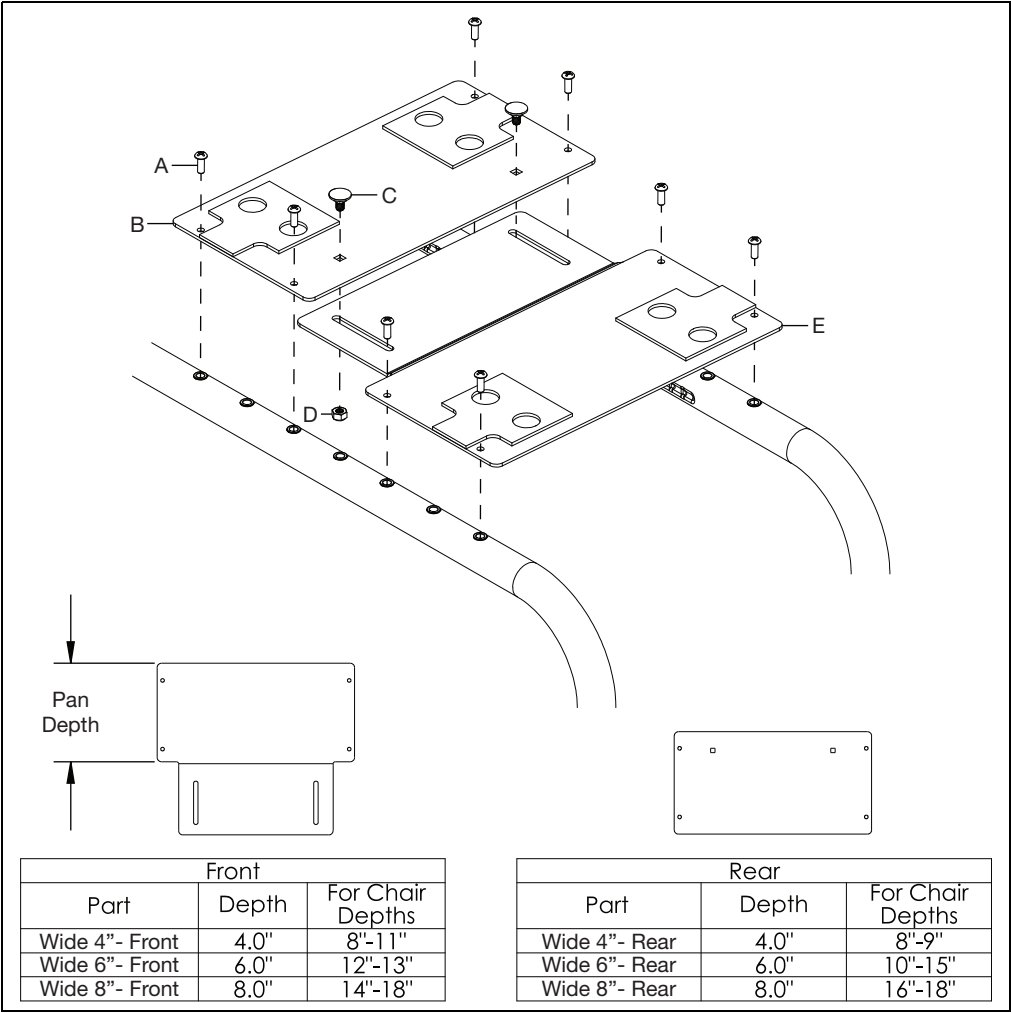
Use A, D, B, E, C, F pattern leaving A loose until F is tightened completely.



Growing Seat Pan

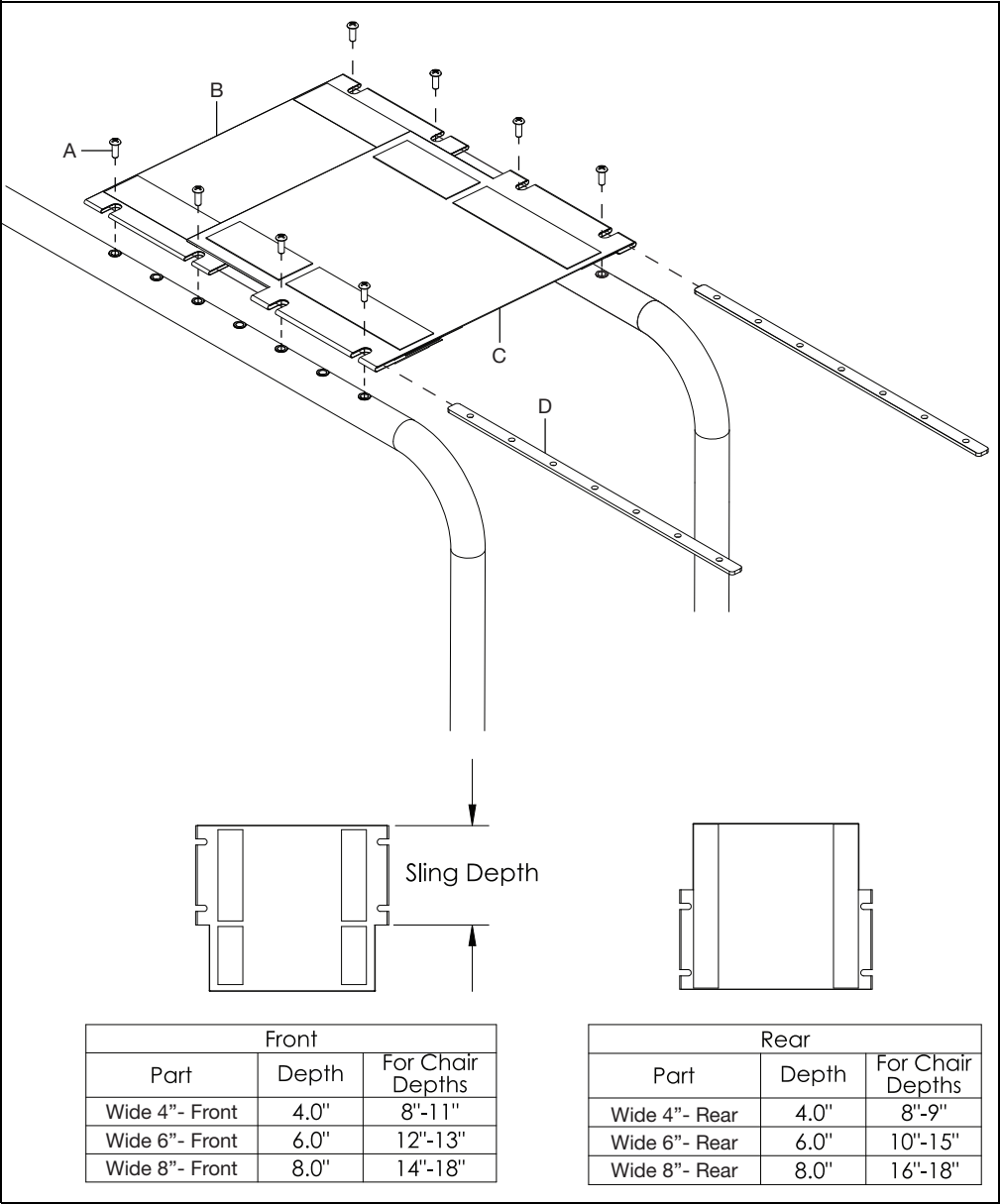
The front and rear growing seat pans each come in three sizes to allow for a possible chair depth range of 8" - 18". See instructions below for information on installing and adjusting the growing seat pan.

1. Install the front growing seat pan (E) onto the chair frame with four screws (A) using a Phillips screwdriver. The wide section of the front seat pan mounts closest to the front of the chair.
2. Install the rear growing seat pan (B) onto the chair frame and the front growing seat pan with four screws (A) using a Phillips screwdriver. The seat pan depth is controlled by the two bolts (C) and two nuts (D) that are installed through the rear and front growing seat pans using a 10mm wrench.



Growing Seat Sling

1. Set the front seat sling (C) onto the rear seat sling (B) and insert seat rails (D) through pockets on the edges of the seat slings.
2. Secure seat slings onto chair with screws (A) using a Phillips screwdriver.

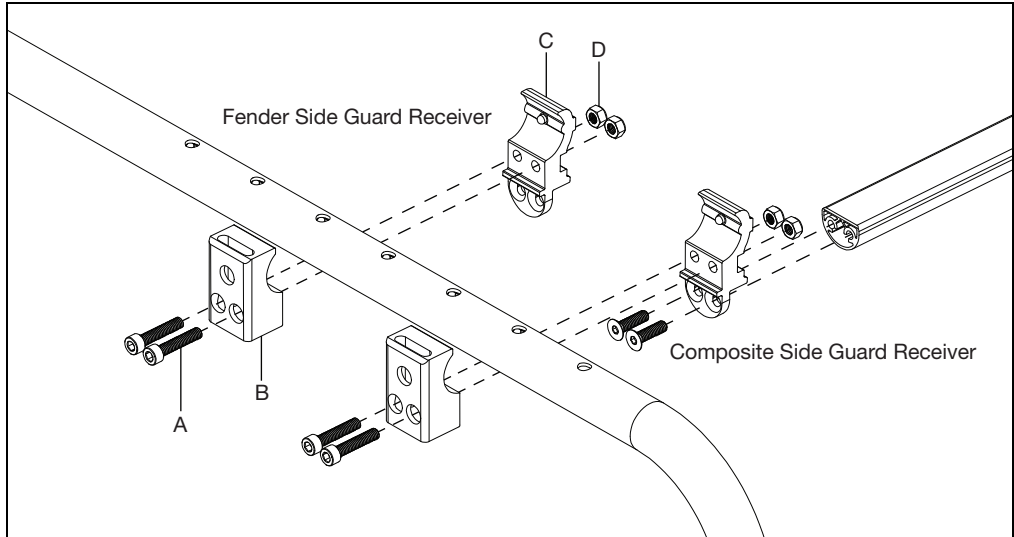


Side Guards

Side Guard Receiver

NOTE: If you are installing the composite side guard receiver, the hardware and outer cross tube clamp will be removed before installing the new.

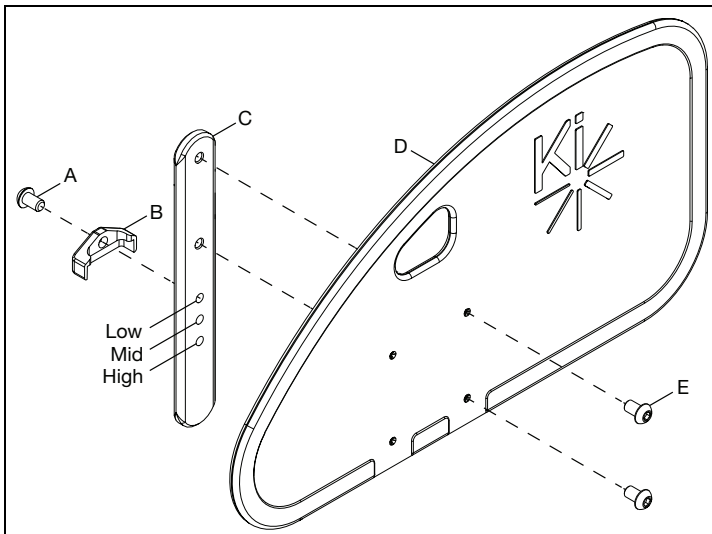
1. Install the side guard clamp (B) and crosstube mount (C) onto frame with two screws (A) and two nuts (D) using a 5mm Allen wrench and a 10mm wrench. When installing the composite side guard receiver, the crosstube mount is already installed on the crosstube.



Removable Adult Side Guard

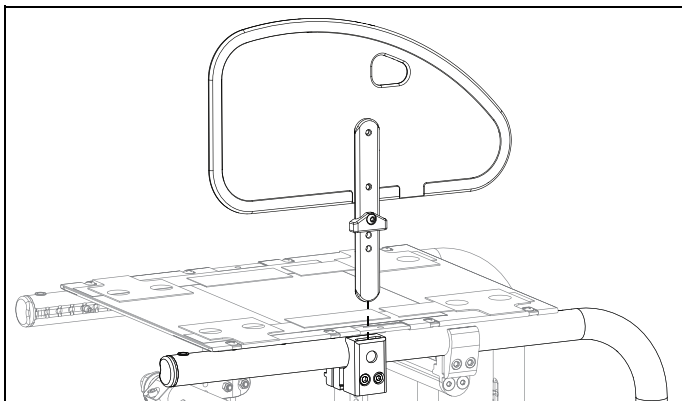
1. Install the adult side guard (D) onto the side guard post (C) with two screws (A) using a 4mm Allen wrench. On the opposite side, install the side guard post stop (B) with a screw (A) using a 4mm Allen wrench.

NOTE: There are two sets of holes that the side guard post (C) can be installed onto the side guard with. Choose the holes that place the side guard in the desired position. The height is also adjusted with the hole that the side guard post stop (B) is installed in.



Side Guards

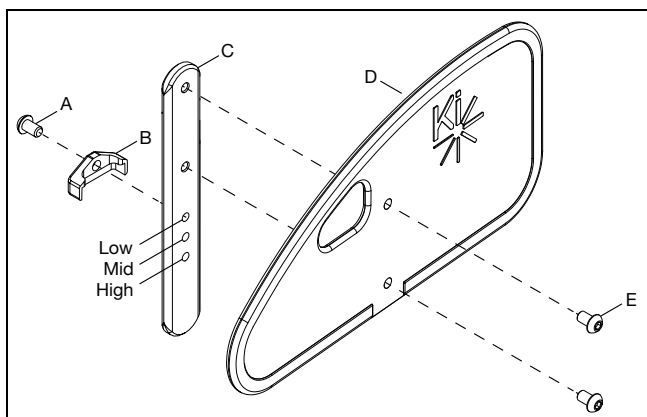
2. Install the side guard assembly into the receiver so the side guard post stop faces the outside of the chair.



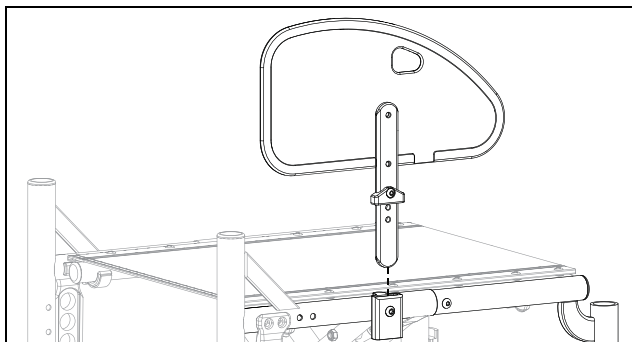
Removable Pediatric Side Guard

1. Install the pediatric side guard (D) onto the side guard post (C) with two screws (A) using a 4mm Allen wrench. On the opposite side, install the side guard post stop (B) with a screw (A) using a 4mm Allen wrench.

NOTE: The height of the pediatric side guard can be adjusted with the three holes on the side guard post (C).

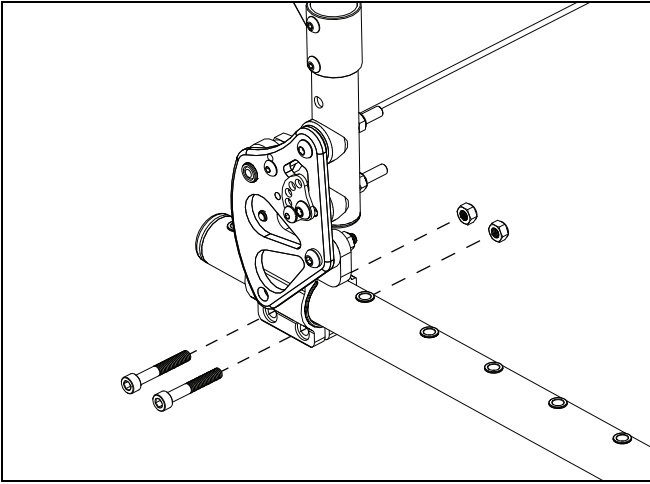


2. Install the side guard assembly into the receiver so the side guard post stop faces the outside of the chair.

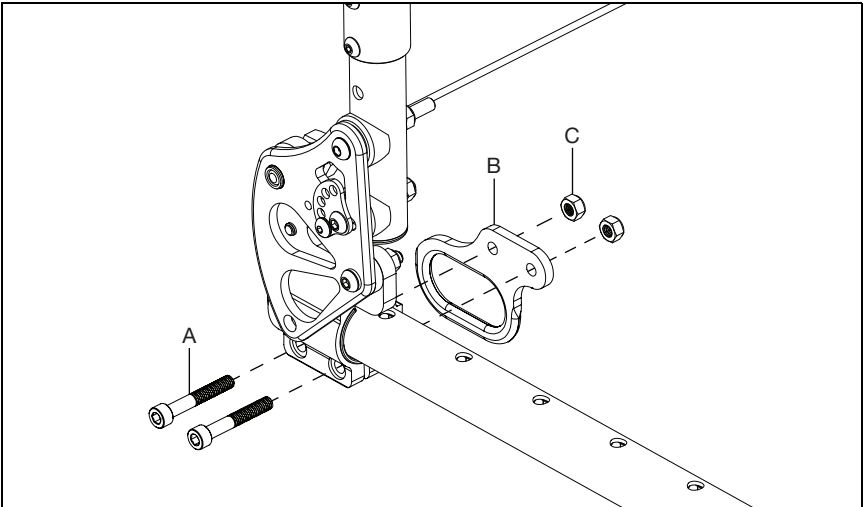


Transit

1. Remove the backrest clamp hardware using a 5mm Allen wrench and a 10mm wrench. Save hardware.

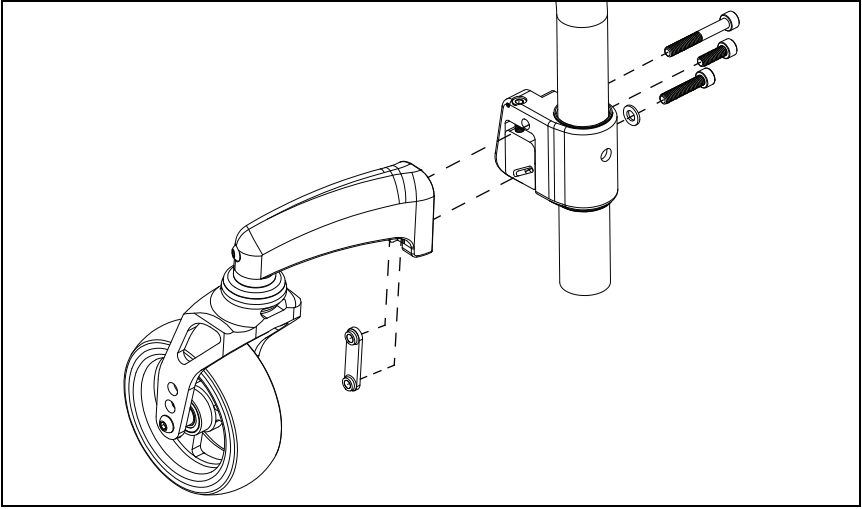


2. Install the rear transit bracket (B) outside of the backrest clamp on the inside part of chair. The rear transit bracket is secured with two bolts (A) and two nuts (C) using a 5mm Allen wrench and a 10mm wrench. The transit loop should be facing the rear of the chair. See image below.

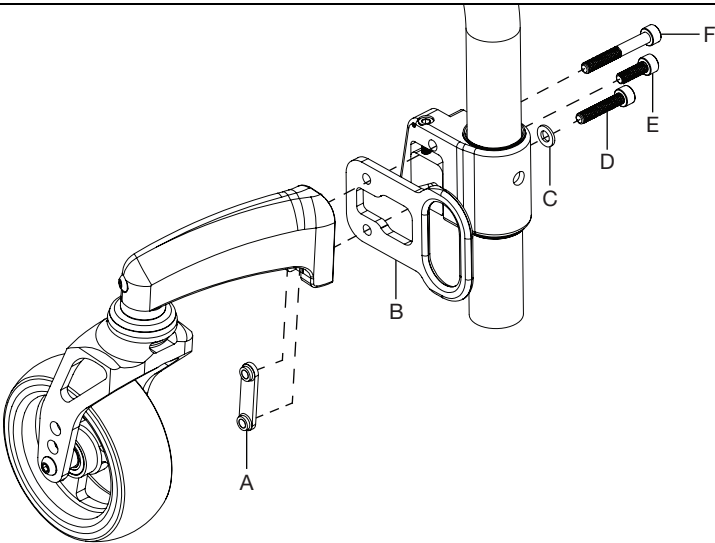


Transit

3. Remove the hardware to detach the caster arm from the caster mount using a 5mm Allen wrench.

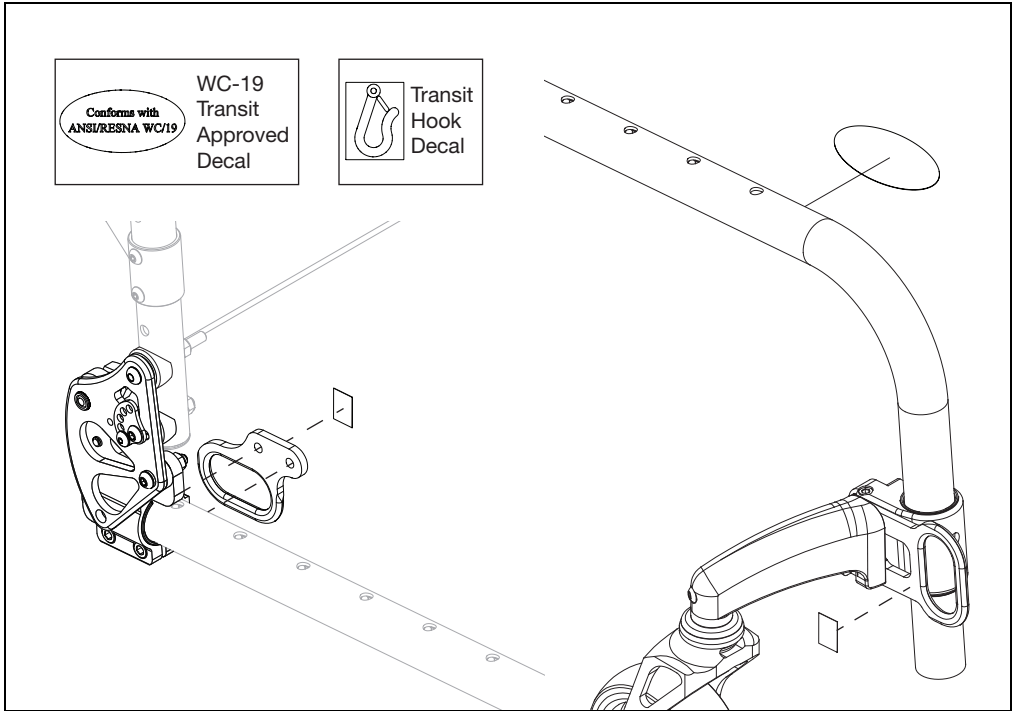


4. Install the front transit bracket in between the caster arm and the caster mount and secure with three bolts, washer and a dual hole nut using a 5mm Allen wrench.



Transit

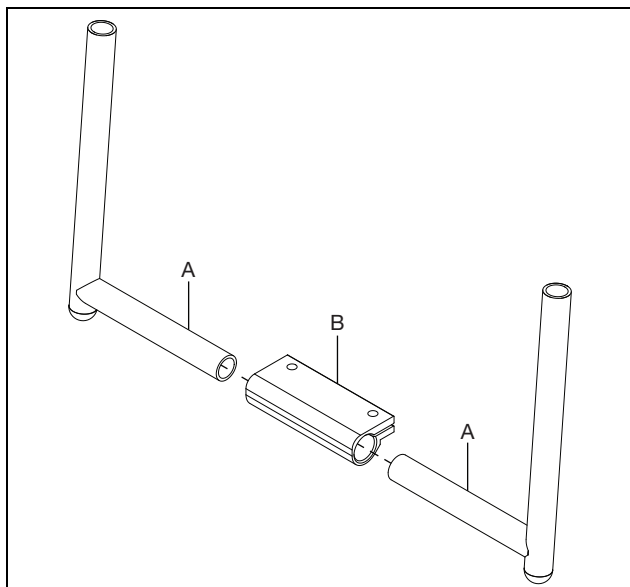
5. Install transit hook decals on the sides of each transit bracket.
6. Install WC-19 Transit Approved decal on the bottom of the frame tube near the rear transit bracket.



7. Repeat steps to install rear and front transit brackets on opposite side. Once completed, there will be four total transit brackets - two rear and two front.

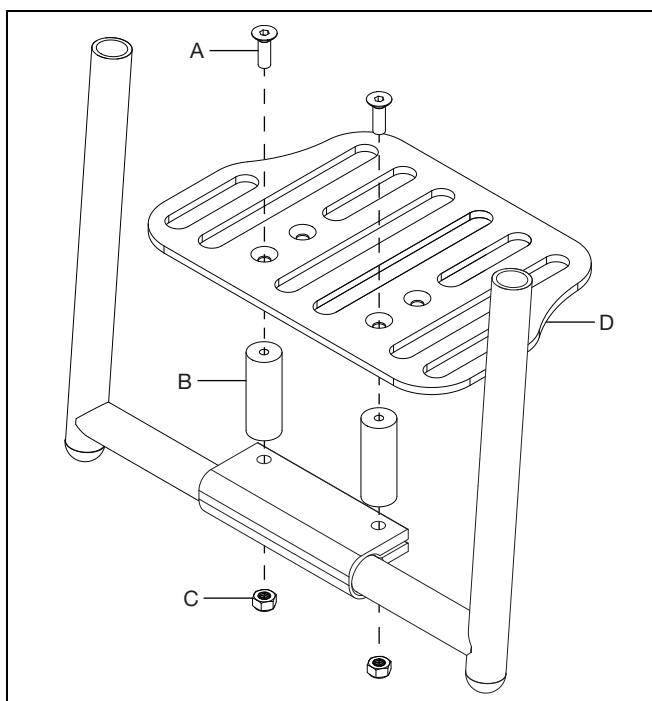
Aluminum Angle Adjustable Footrest

1. Install the footrest extension tubes (A) into the footrest adjustable clamp (B).



2. Install the footrest platform (D) onto the footrest adjustable clamp and secure with two screws (A) and two nuts (C) using a 5mm Allen wrench and a 10mm wrench. If a riser (B) is being used to elevate the footrest platform, install between the footrest platform and the footrest adjustable clamp.

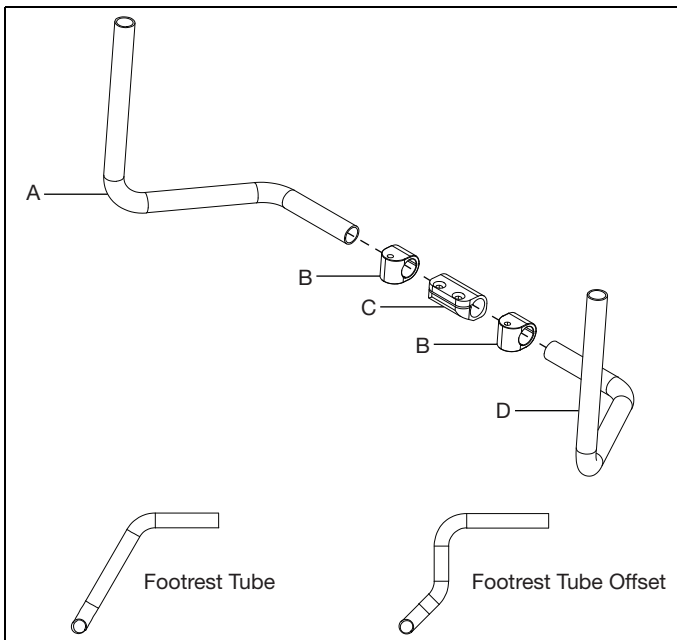
NOTE: Ensure the footrest width is set to desired width before tightening the footrest platform hardware.



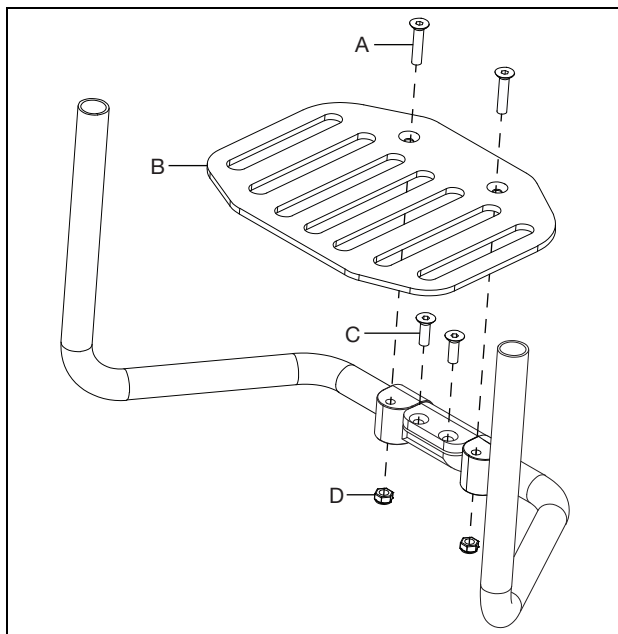
Angle Adjustable Flip Under Footrest

1. Install the footrest tubes (A & D) through the pivots (B) into the footrest flip stop clamp (C).

NOTE: The footrest tube and the footrest tube offset are shown below. The installation process is the same for both footrest tubes.

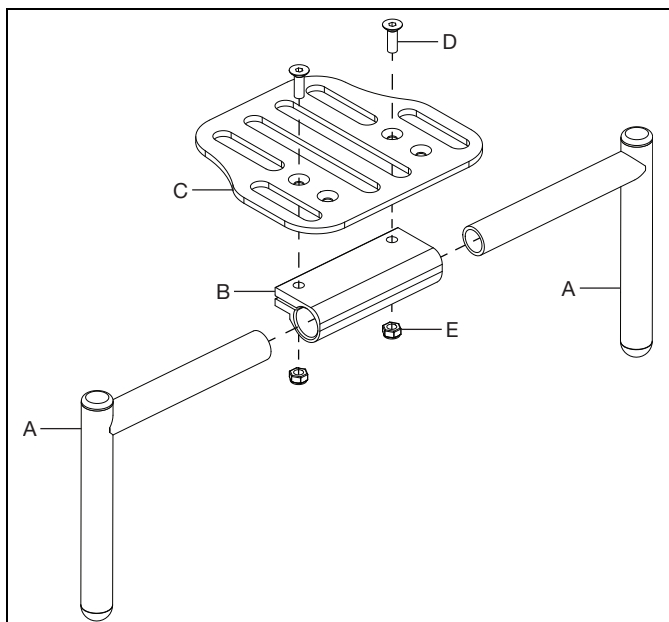


2. Install two screws (C) into the footrest flip stop clamp to secure the footrest tubes using a 5mm Allen wrench. Install the footrest platform (B) onto the footrest flip stop clamp with two screws (A) and two nuts (D) using a 5mm Allen wrench.

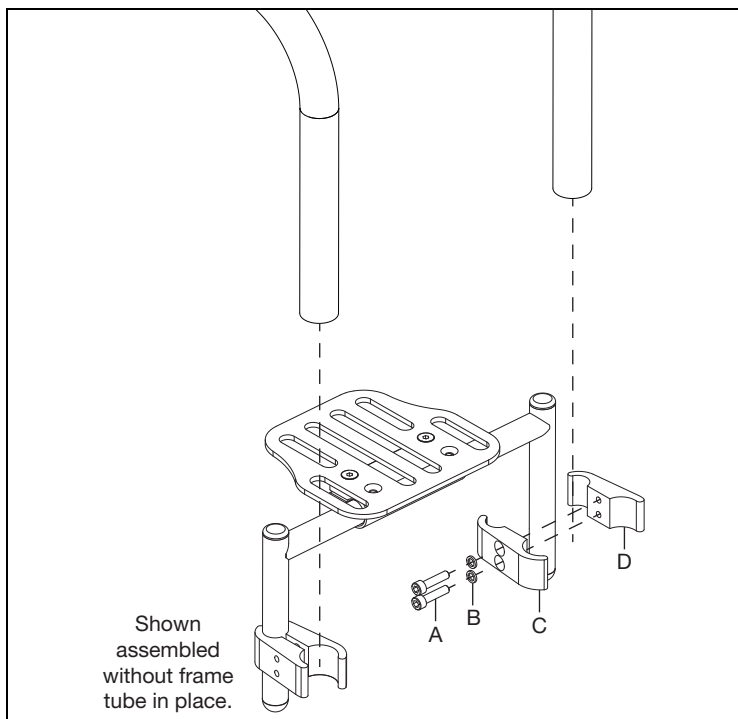


High Mount Angle Adjustable Footrest

1. Install the footrest tubes (A) into the footrest adjustable clamp (B) and secure by installing the footrest platform (C) onto the clamp with two screws (D) and two nuts (E) using a 5mm Allen wrench.

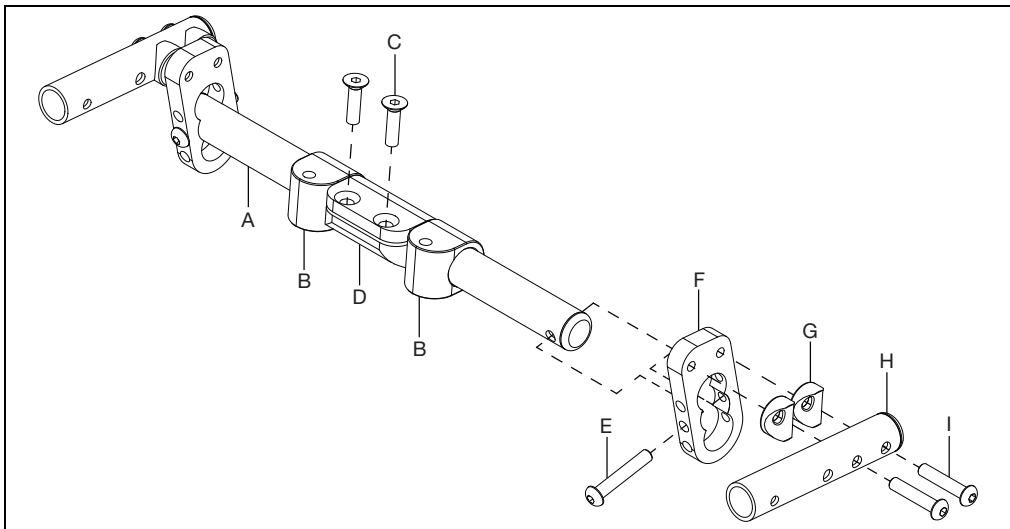


2. Install the two clamps (C & D), one end on the footrest tube and the other end around the frame tube, with two screws (A) and two lock washers (B) using a 5mm Allen wrench.

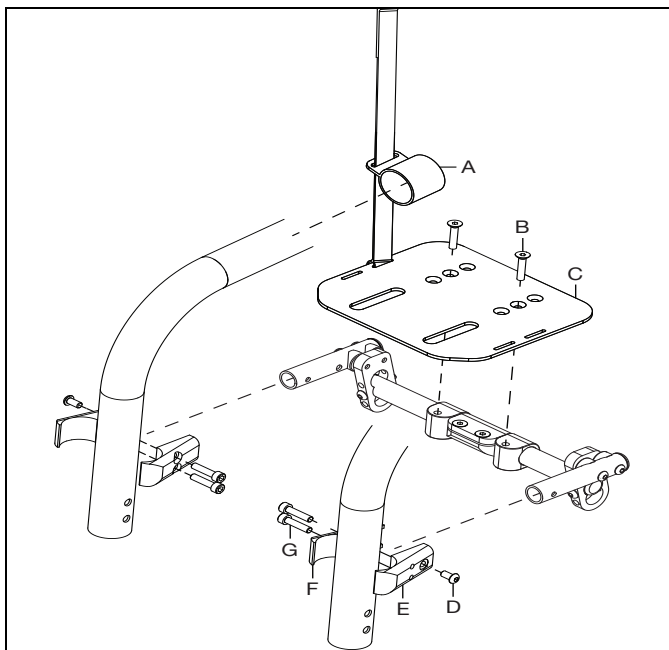


High Mount Angle Adjustable Flip Under Footrest

1. Install the pivots (B) and clamp (D) onto the footrest tube (A) and secure with two screws (C) using a 5mm Allen wrench.
2. Install the bracket (F) onto the end of the footrest tube and secure with screw (E) using a 4mm Allen wrench.
3. Install the footrest flip mount tube (H) onto the bracket with two screws (I) and two saddles (G) using a 4mm Allen wrench.



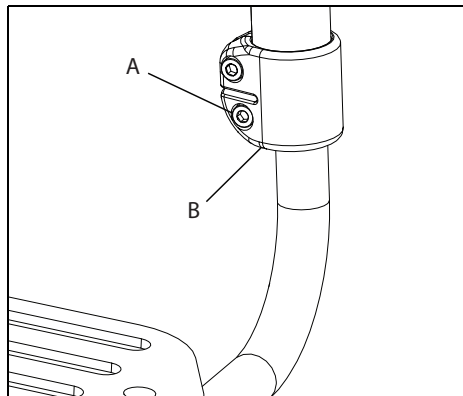
4. Install foot platform (C) onto pivots with two screws (B) using a 5mm Allen wrench. While installing the foot platform, slide the flip foot strap (A) onto frame tube.
5. Install the top and bottom footplate clamps (E & F) onto the footrest tubes and the frame tubes with three screws (D & G) using a 4mm Allen wrench and a 5mm Allen wrench.



Adjusting the Footrest

NOTE: Some footrests are adjusted by moving the clamps they are attached with up or down. The standard footrest adjustment is shown below.

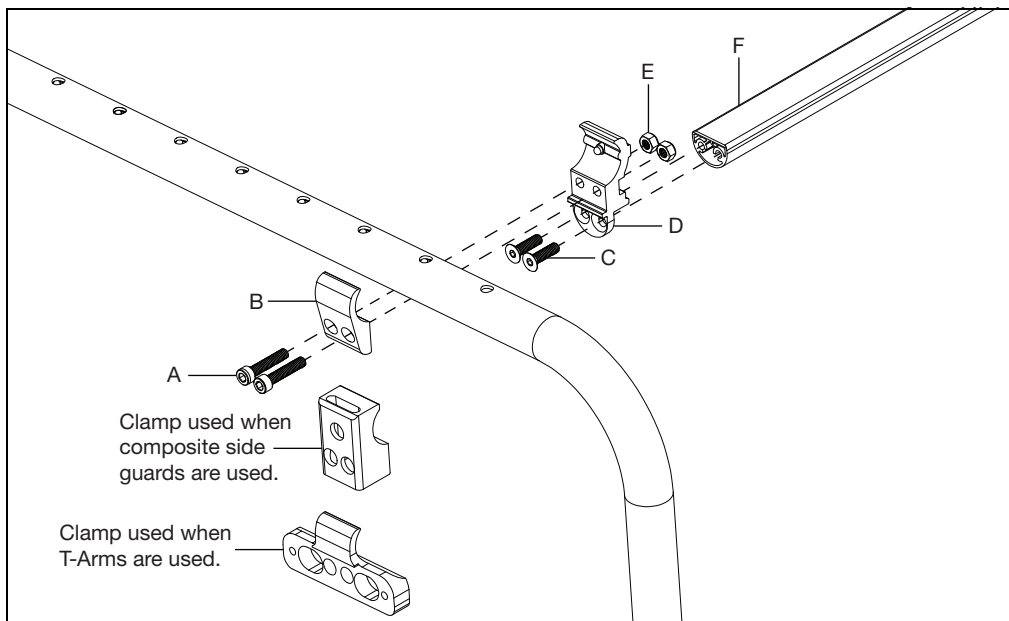
1. On each side of the frame, loosen the lower 3mm screw (A) on the adjustment clamp (B).
2. Adjust the footrest tube up or down to the desired height within the side frame. If the footrest was being replaced, the footrest tube would slide all the way out in this step.
3. Ensure both sides are adjusted equally and retighten the 3mm screw on each side to 40 in./lbs to secure.



Cross Tube

1. Install the cross tube (F) to the inside clamp (D) with two screws (C) using a 5mm Allen wrench. Repeat on opposite side.
2. Install the cross tube assembly to the chair frame by installing two screws (A) and two nuts (E) through the inside clamp to the outside clamp (B) using a 5mm Allen wrench. Repeat on opposite side.

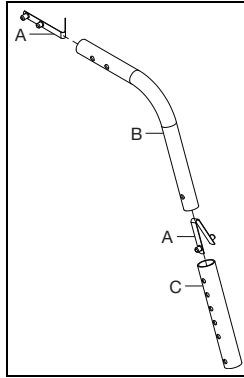
NOTE: A different outside clamp is used when composite side guards or T-Arms are used. See image below for the clamps used in those configurations.



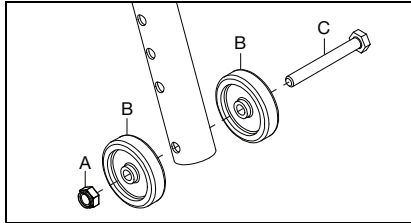
Anti-Tips

NOTE: To ensure safe use, verify that the distance between the footplate and the ground is greater than or equal to 2.5" and always look ahead for potential obstructions or surface transitions.

1. Assemble the anti-tip by connecting the two anti-tip tubes (B & C) and ensuring they "click" together when the detent buttons (A) engage.

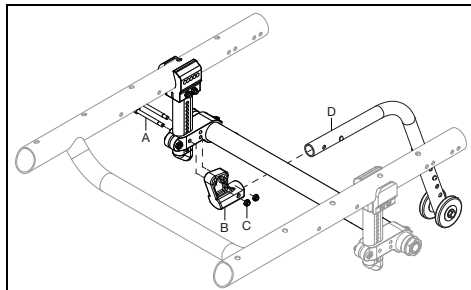


2. Install the wheels (B) onto the anti-tip tube with a bolt (C) and nut (A) using two 10mm wrenches.

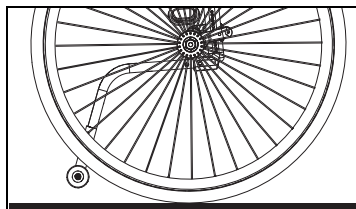


3. Install the anti-tip receiver (B) onto the camber tube mounting clamp with two screws (A) and two nuts (C) using a 4mm Allen wrench and an 8mm wrench. Install anti-tip assembly (D) into receiver until detent button "clicks" into place.

NOTE: With OAD, the receiver should be mounted as shown below. It would never be installed upside down.



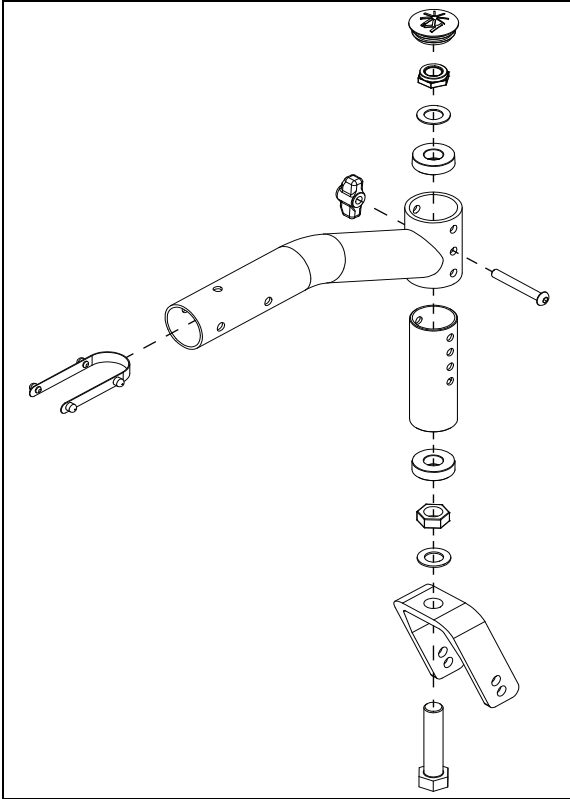
NOTE: After any adjustment, ensure anti-tips clear the wheels as shown below.



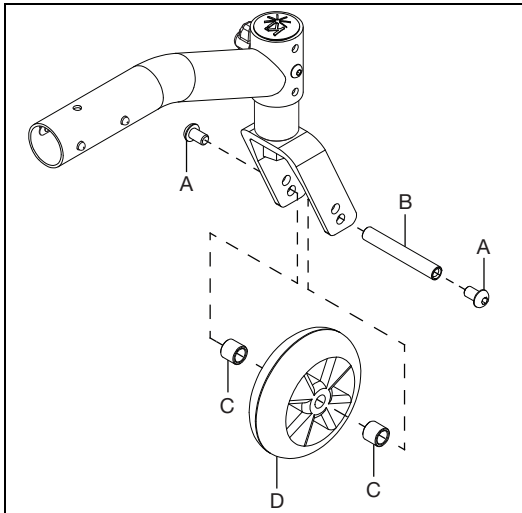
5th Wheel

Standard 5th Wheel

1. Assemble the 5th wheel arm mount as shown below using two ½" wrenches.



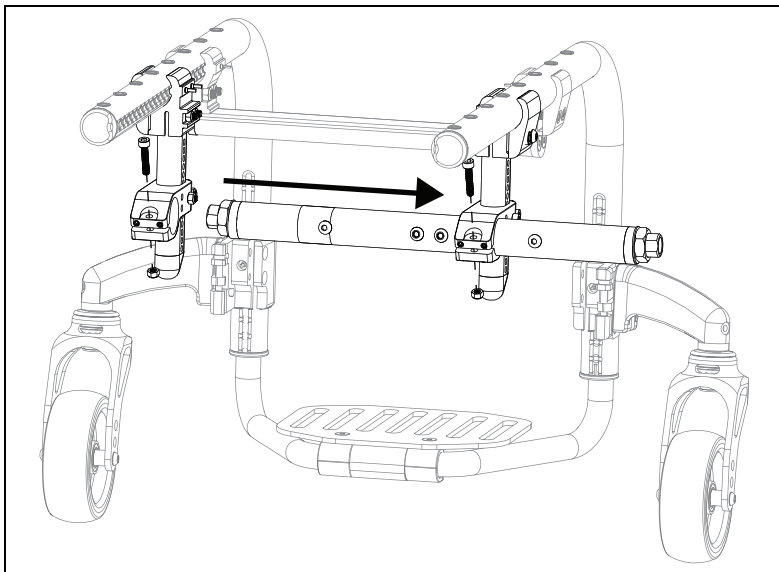
2. Install the caster (D) into the 5th wheel mount forks with two screws (A), threaded barrel (B) and two caster spacers (C) using two 4mm Allen wrenches.



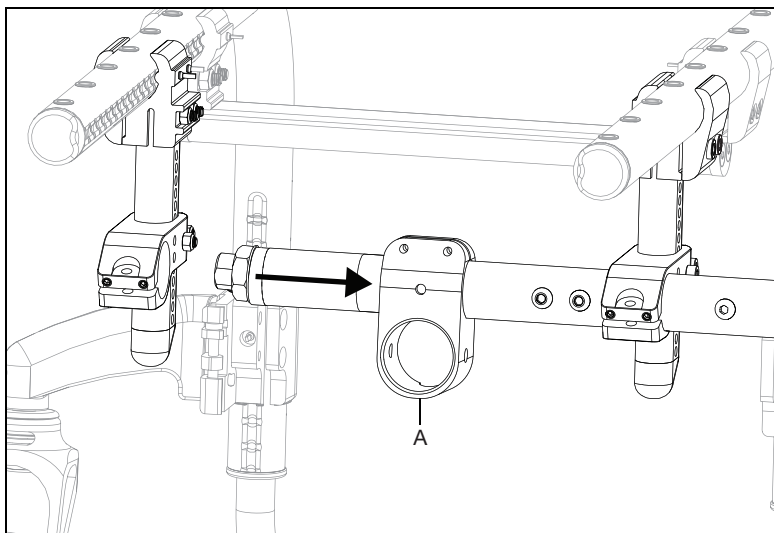
5th Wheel

- Loosen the camber tube mount clamps by removing the bolt and nut from both sides using a 4mm Allen wrench and an 8mm wrench. Slide the camber tube halfway out as shown below.

NOTE: If you are retrofitting to the standard 5th wheel, remove the camber tube completely because a new camber tube is needed.

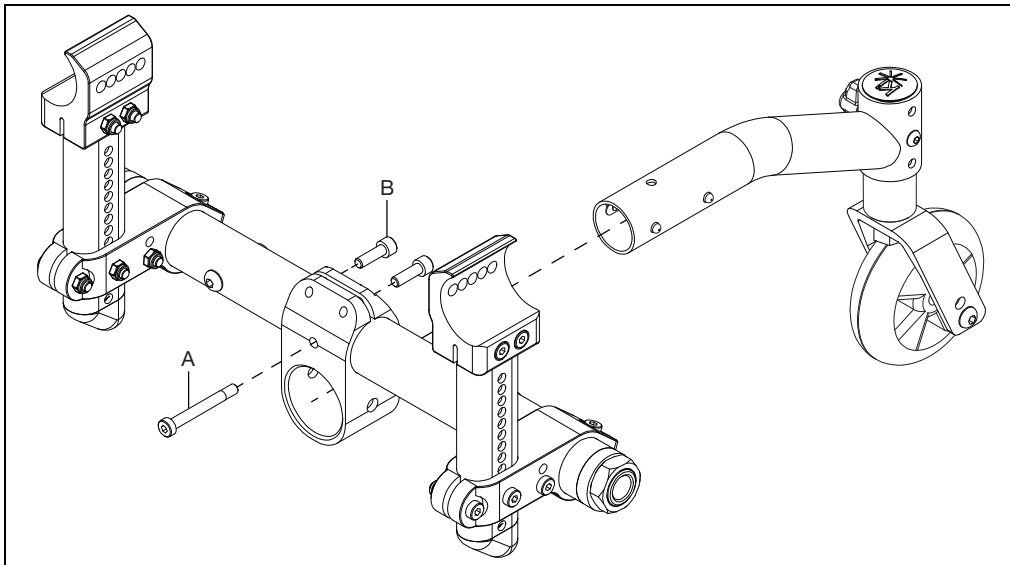


- Slide the 5th wheel mounting clamp (A) onto the camber tube. Slide the camber tube back to the standard position and reinstall hardware to secure the camber tube in place.



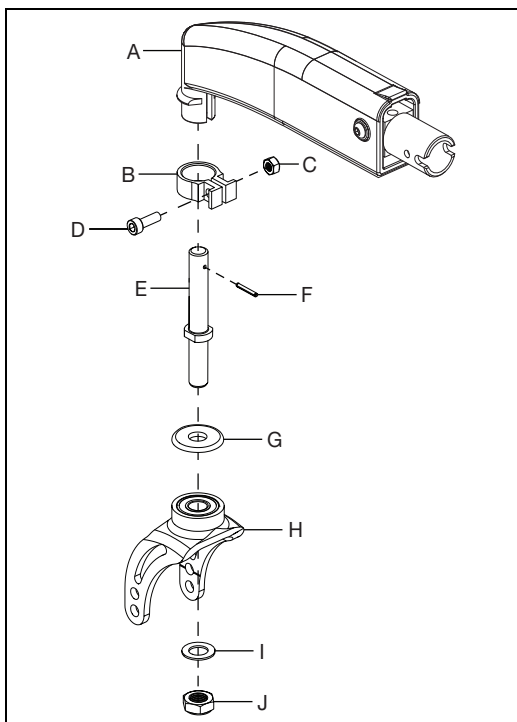
5th Wheel

- Center the 5th wheel mounting clamp and secure in place by installing three screws (A & B) using a 4mm Allen wrench. Install the 5th wheel into the clamp and ensure the detent buttons "click" or lock into place.



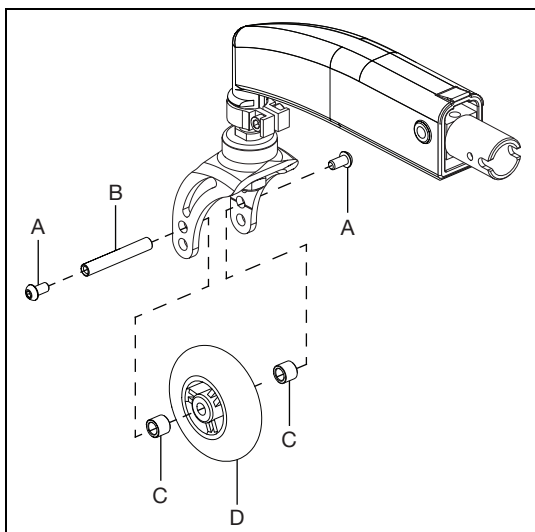
Dynamic 5th Wheel

- Assemble the 5th wheel arm mount as shown below using a 1/2" wrench, 10mm wrench and a 5mm Allen wrench.



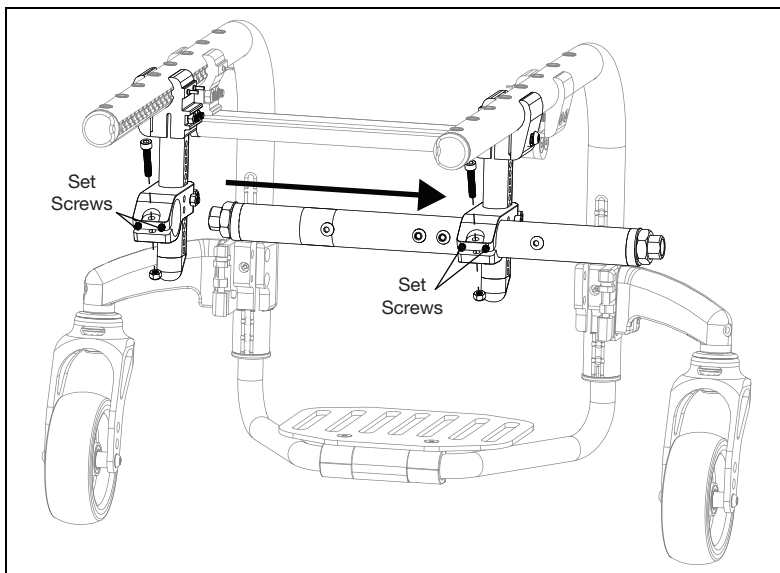
5th Wheel

2. Install the caster (D) into the 5th wheel mount forks with two screws (A), threaded barrel (B) and two caster spacers (C) using two 4mm Allen wrenches.



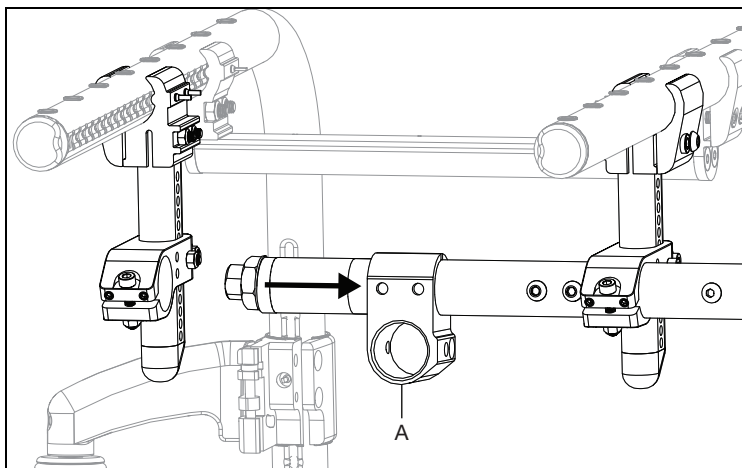
3. Loosen the camber tube mount clamps by removing the bolt and nut from both sides using a 4mm Allen wrench and an 8mm wrench. Loosen the four set screws on the camber tube mount clamps using a 2.5mm Allen wrench. Slide the camber tube halfway out as shown below.

NOTE: If you are retrofitting to the dynamic 5th wheel, remove the camber tube completely because a new camber tube is needed.

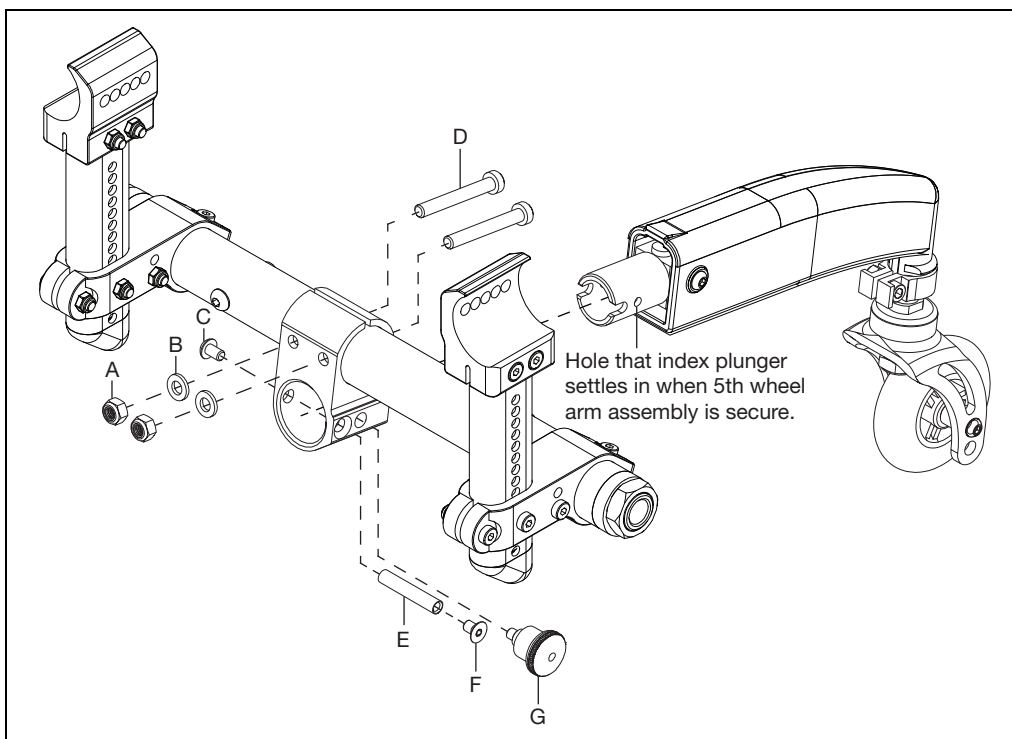


5th Wheel

- Slide the 5th wheel mounting clamp (A) onto the camber tube. Slide the camber tube back to the standard position and reinstall hardware to secure the camber tube in place.



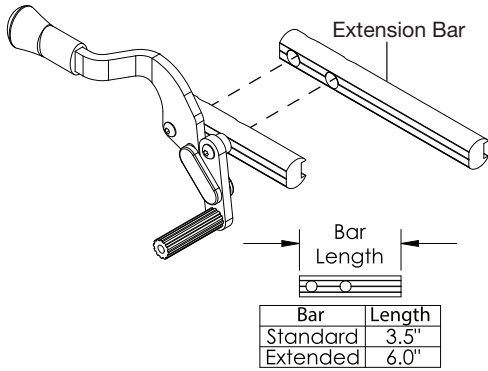
- Center the dynamic 5th wheel mounting clamp and secure in place by installing two screws (D), two washers (B) and two nuts (A) using a 5mm Allen wrench and a 10mm wrench. Install the two screws (F), a threaded barrel (E) and indexing plunger (G) using two 3mm Allen wrenches. Install the 5th wheel into the clamp and secure in place by pulling the index plunger out, inserting the 5th wheel and then releasing the index plunger. The index plunger secures the 5th wheel in place when reinserted into the 5th wheel tube hole.



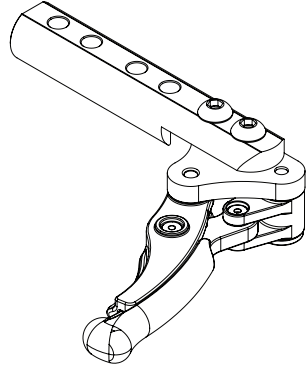
Wheel Locks

See image below for information on the types of wheel locks available. Installation of the wheel lock clamps is on the next page.

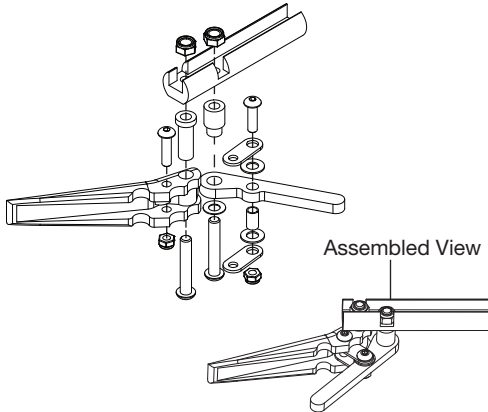
Push to Lock Flush Mount



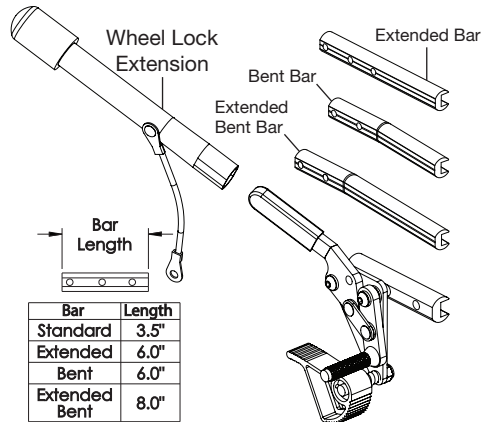
Low Profile Scissor Lock



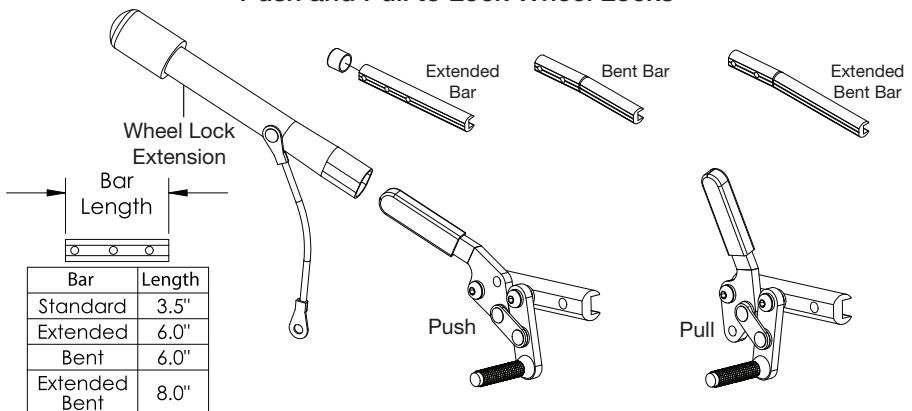
Short Thro Scissor Locks



Grade Aids



Push and Pull to Lock Wheel Locks

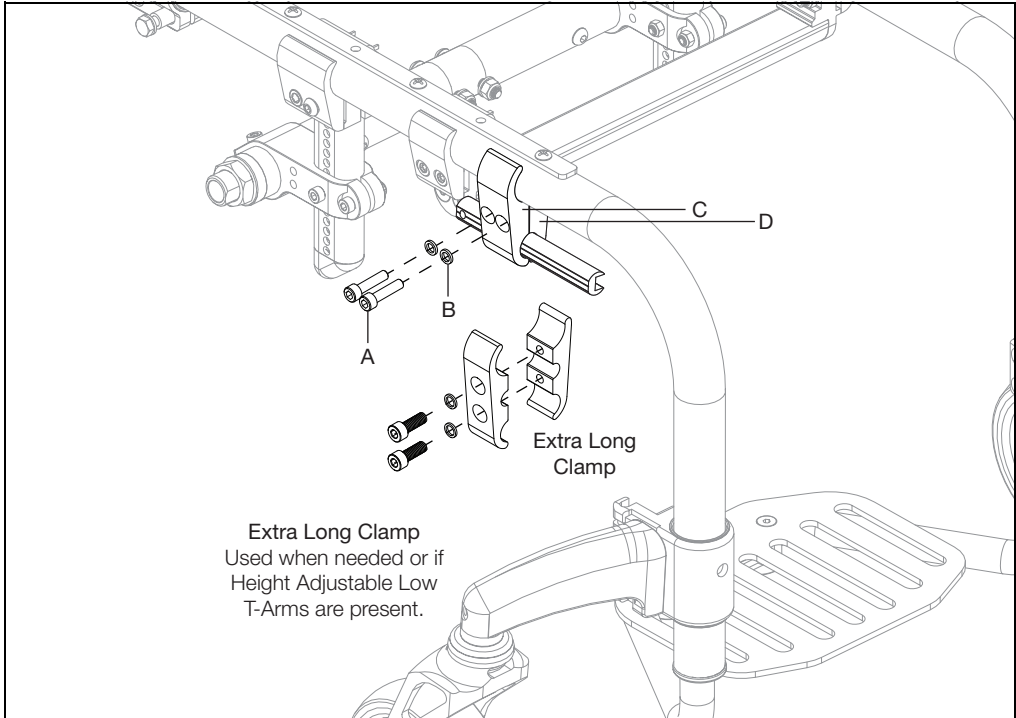


Wheel Locks

Installing Wheel Lock Clamps

1. The wheel lock assemblies with the wheel lock bars are mounted onto the chair using the wheel lock clamps (C & D). There are two types of wheel lock clamps that are shown below. Install hardware with the wheel lock bar and chair frame in position using a 5mm Allen wrench and a 6mm Allen wrench. Once installed, ensure wheel lock engages at least 1/8" into tire and locks properly prevent the chair from moving when engaged.

NOTE: Always tighten wheel lock hardware by alternating between hardware while tightening a little at a time. This prevents overclamping on one set of hardware which can lead to binding of the fasteners and increased difficulty in removal.



One Arm Drive (OAD)

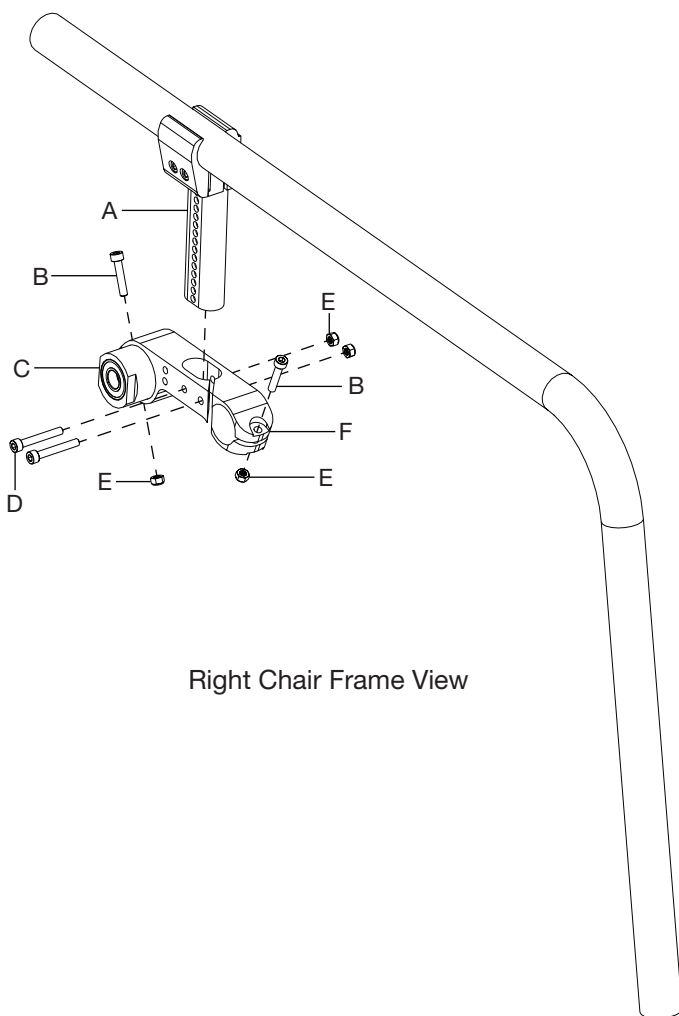
Installation

1. Remove wheels, camber tube and camber tube mount clamps.
2. Install the camber tube mount clamps (F) onto the existing camber towers (A) using three bolts (D & B) and three nuts (E) using a 4mm Allen wrench and an 8mm wrench. The holes used to install the camber mount clamp onto the camber tower determines seat height. Use the holes that provide the desired seat height for the user.

NOTE: Some configurations will require the towers to be mounted outboard of the frame. To identify if the chair configuration requires outboard mounting, review the Shaft Reference at the end of these instructions.

3. The axle mount (C) is mounted reverse of how it is shown in Fig. 1 when using the 0° camber configurations. Remove the bolt (B) and nut (E) using a 4mm Allen wrench and an 8mm wrench, reverse the axle mount and reinstall hardware.

NOTE: The completed camber tower assembly is shown pointing forward in the image below. If a 5th wheel is being used, the camber tower assembly will be pointed rearward.



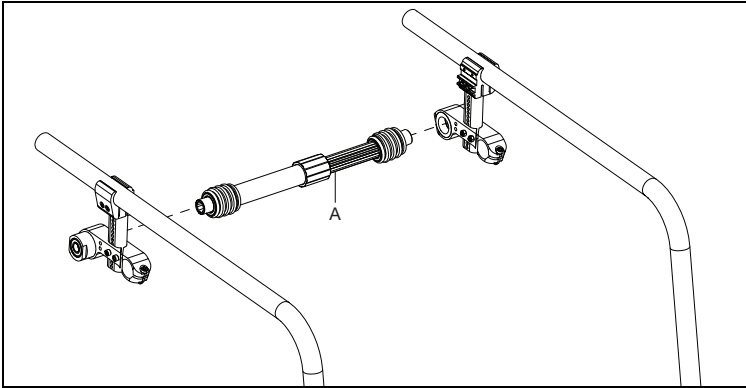
Right Chair Frame View

One Arm Drive (OAD)

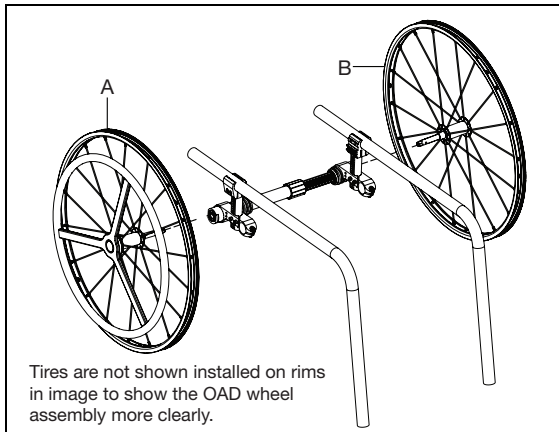
4. Install the camber mount clamp on the opposite side the same way as steps 2 and 3. Before fully tightening, install the OAD drive shaft (A) into the two axle mounts.

NOTE: See tables at the end of these instructions for the drive shaft lengths used in different configurations.

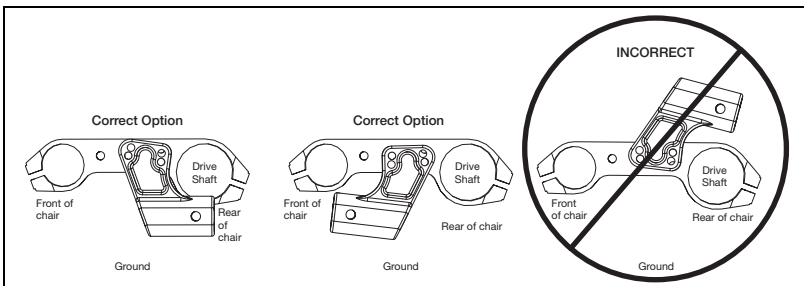
NOTE: Some configurations require one wheel to be installed, then the drive shaft, then the opposite wheel. These configurations are called out in the Shaft Reference at the end of these instructions.



5. Install the OAD wheels on both sides of chair. Install the OAD wheel with the handrim (A) on the desired drive side. The OAD wheel with no handrim (B) is the following side and is installed opposite the drive wheel.



NOTE: With OAD, the receiver should be mounted as shown below. It would never be installed upside down.



One Arm Drive (OAD)

For OAD sizing, hardware and more information please visit our parts manual or click the link [HERE](#) to jump to the OAD chart.

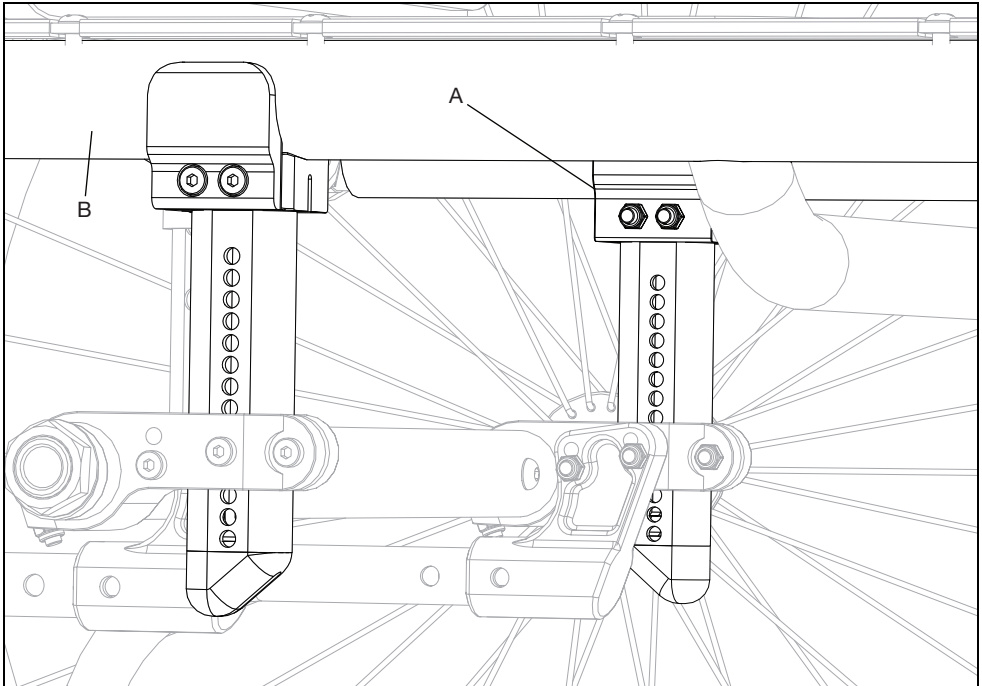
Center of Gravity (COG)

You can adjust your center of gravity by moving the two camber mount clamps (A) forward or rearward on the seat tube (B).

Moving the camber mount clamps forward shortens the wheelbase and lightens the front end, making your chair more maneuverable. Moving the camber mounts rearward makes the chair more stable and less likely to tip over rearward.

NOTE: Changes to the center of gravity may affect the rear seat height, toe-in / toe-out of the rear wheels and the squareness of the casters. If you change your center of gravity position, readjust all of these settings if necessary.

NOTE: Adjusting your chair's center of gravity will require readjusting the location of the wheel locks (if provided).

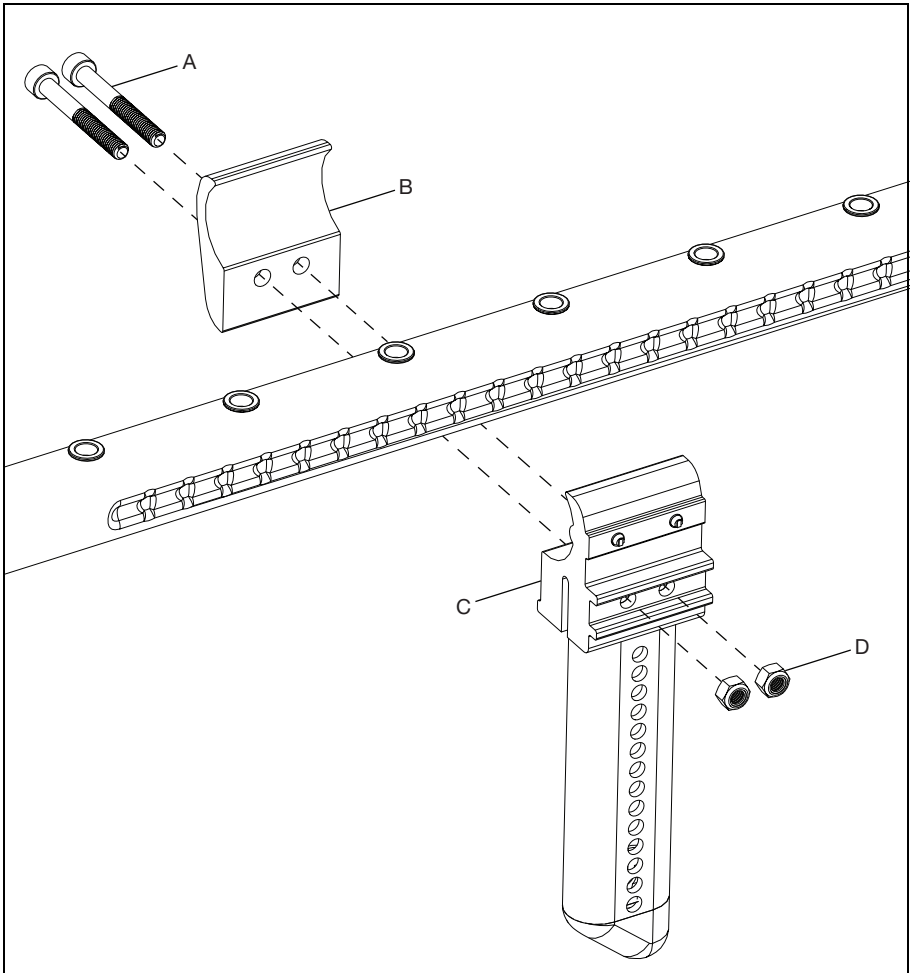


Center of Gravity (COG)

To adjust the center of gravity location:

- a. Remove both rear wheels.
- b. Loosen the two screws (C) and nuts (D) that secure the camber mounts (A & B) to the seat tubes on each side of the frame.
- c. Grasp both sides of the camber tube and move the camber mounts forward or rearward along the seat tube. You should feel the detent click into each dimple in the frame as you move the mounts forward or rearward. Adjustments are made in 1/4" increments.
- d. Make sure the mounts on both sides of the frame are adjusted equally on both sides of the frame before reinserting screws and nuts. Tighten until secure.
- e. Once the camber mount clamps are secured, attach the rear wheels, occupy the chair and maneuver it with a spotter to get a feel for the new adjustment.

NOTE: Always use at least two screws when attaching the camber mount to the frame.

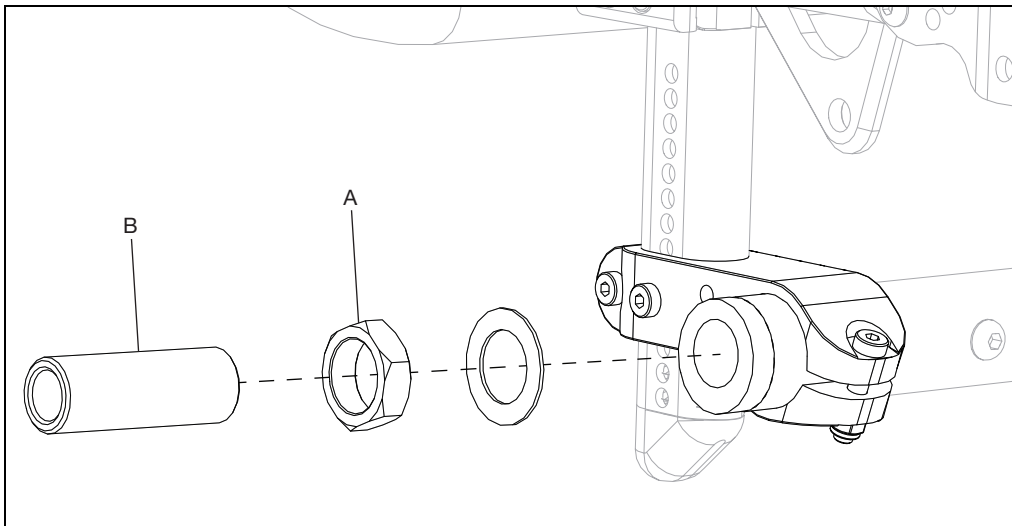


Wheelbase Width Adjustment

Adjusting the wheelbase width allows the rider the option to move the wheels closer or further away from the hips. It also compensates for camber adjustment and gives the proper wheel spacing to maximize pushing efficiency.

Adjust the wheelbase width:

1. Loosen the nut (A) with a 24mm wrench and turn the threaded axle sleeve (B) in or out to the desired width.
2. Retighten nut.
3. Repeat on opposite side.



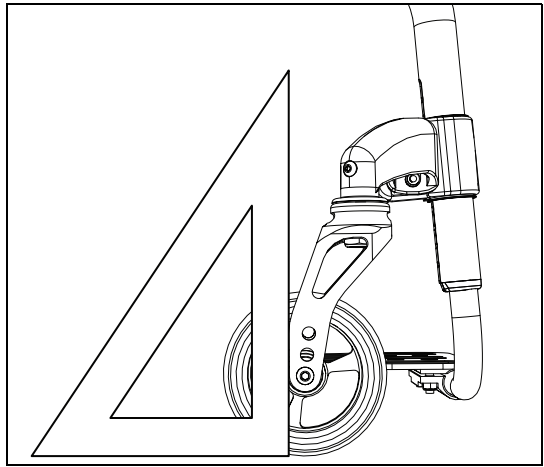
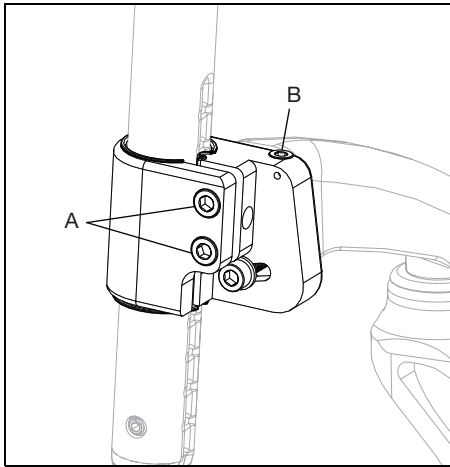
Squaring Caster

For optimal performance, the front caster housing should always be aligned perpendicular to the ground. The Klik is shipped aligned. Many of the adjustments made in properly setting up the wheelchair, however, will result in the caster housing getting out of alignment.

After all other adjustments are made, you should check your caster housing alignment and realign if the housing is not perpendicular to the ground.

For optimum performance, the caster housing should always be at a 90° angle to the floor (perpendicular to the ground).

1. To change the angle, place the chair on a flat surface (such as a table).
2. Loosen the two 6mm Allen screws (A) on top and bottom of caster mount. This will allow the caster housing to pivot.
3. Place a large right triangle against the table surface and flat trailing edge of caster fork.
4. To adjust caster angle turn the 3mm adjuster screw (B). This will adjust caster angle forward or rearward. This will align the caster stem rotational axis perpendicular to the floor surface.
5. When the alignment is correct, retighten the two 6mm retaining screws to 80 in./lbs (9.04 N*m) (A).
6. Tighten screws in a balanced fashion - tighten one screw to 50 in./lbs (5.65 N*m) and then the second to 50 in./lbs (5.65 N*m). Return to tighten the first screw to 80 in./lbs (9.04 N*m) and finally the second screw to 80 in./lbs (9.04 N*m). Repeat on opposite side.



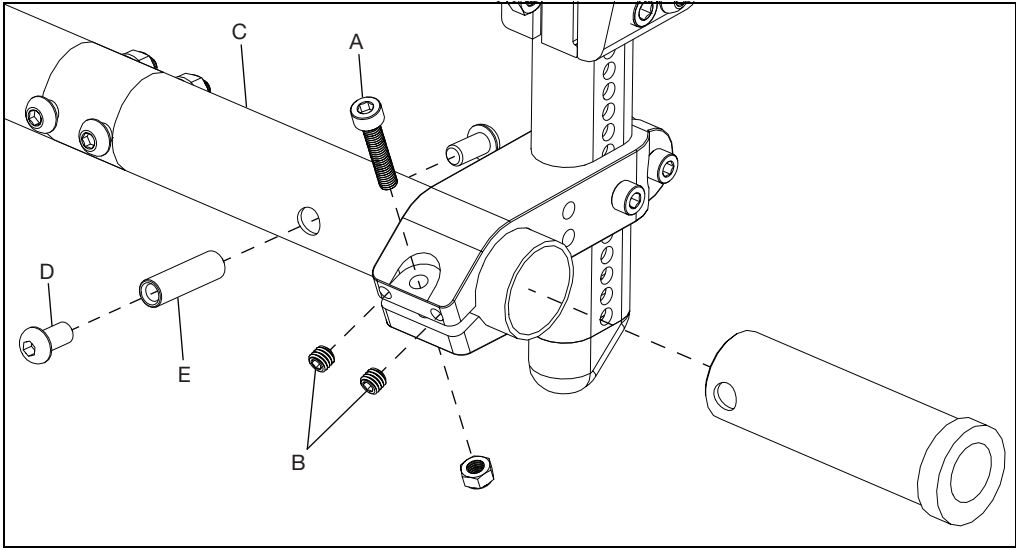
Setting Toe to Zero

NOTE: A wheelchair equipped with 0° camber adapter cannot have a toe-in-toe-out condition. This adjustment is only required when using 2°, 4°, 6° and 8° camber adapters.

Toe refers to how well the rear wheels of the chair are aligned relative to the ground. It affects how well the chair will roll. Drag or rolling resistance is optimally minimized when the wheel toe is set to zero.

Setting the toe to zero:

1. Loosen the two cap screws (A) (1 per side) that secure the camber tube clamp. Then loosen set screws (B), 2 per side.
2. Rotate the camber tube (C) until the screws (D) that secure the camber adapters are level with the ground. The toe is now set at zero.
3. Before tightening the screws (A & B), make certain that the camber tube is centered left-to-right relative to the wheelchair frame. There should be an equal gap on both sides or none at all.
4. Tighten one screw to 80 in/lb (9.04 N*m) (A) then tighten the screw on the opposite side to 80 in/lbs (9.04 N*m).
5. Tighten set screws (B) until securely in place.

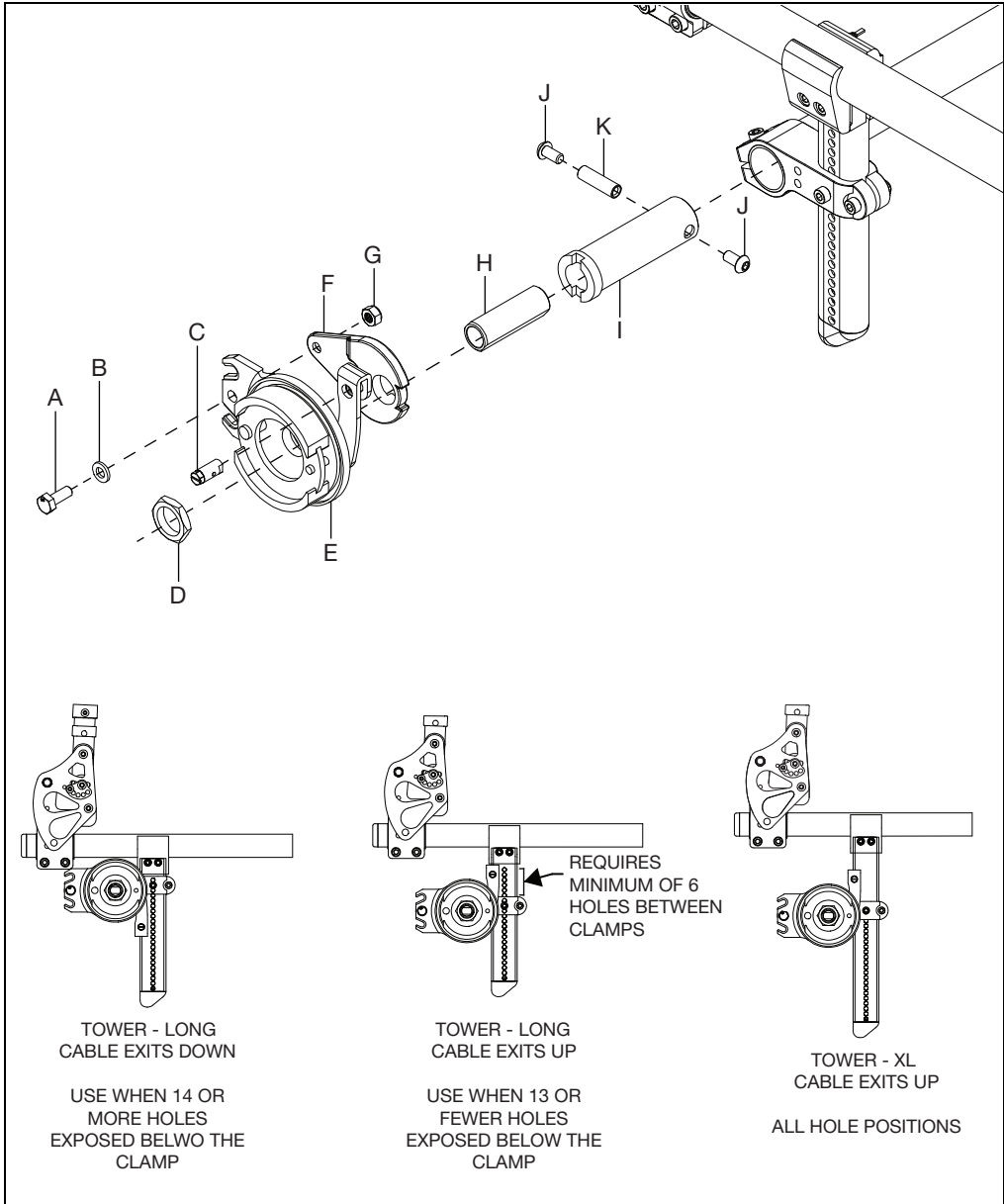


Drum Brake

NOTE: Remove wheels and axle sleeves before beginning the drum brake instructions.

1. Install the drum brake adapter (F) to the drum brake rotor (E) with bolt (A), washer (B) and nut (G) using two 10mm wrenches. Thread the pinch bolt (C) into the drum brake arm.
2. Install the drum brake rotor assembly to the axle plate with axle receiver nut (D), axle sleeve (H), camber adapter (I), two bolts (J) and threaded barrel (K) using two adjustable wrenches and two 5mm Allen wrenches.

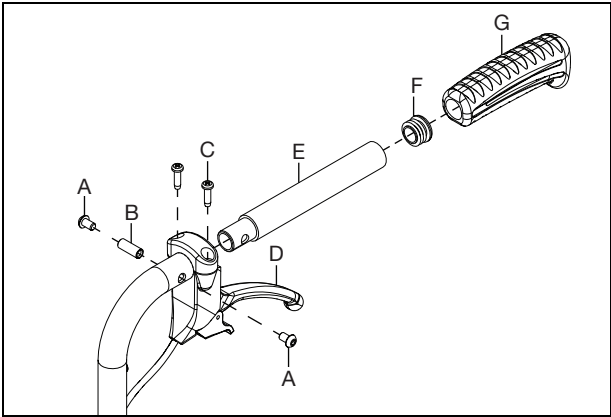
NOTE: The drum brake orientation varies depending on the camber tower position. See the diagrams below for additional information.



Drum Brake

- 3. Install the cable to the trigger lever (D) by removing the lever from the mount and removing the cable core from the cable jacket and routing it through the rearmost hole in the lever. Replace the lever and thread the core back through the cable jacket.
- 4. Install trigger lever (D) and extension adapter (E) to the back post handle with four screws (A & C) and threaded barrel (B).
- 5. Install the tube end plug (F) on the back of the extension adapter.
- 6. Install the push handle grip (G) onto the extension adapter. Some chairs may have the EZ Grip, see the EZ Grip section for installation instructions for those handle grips.

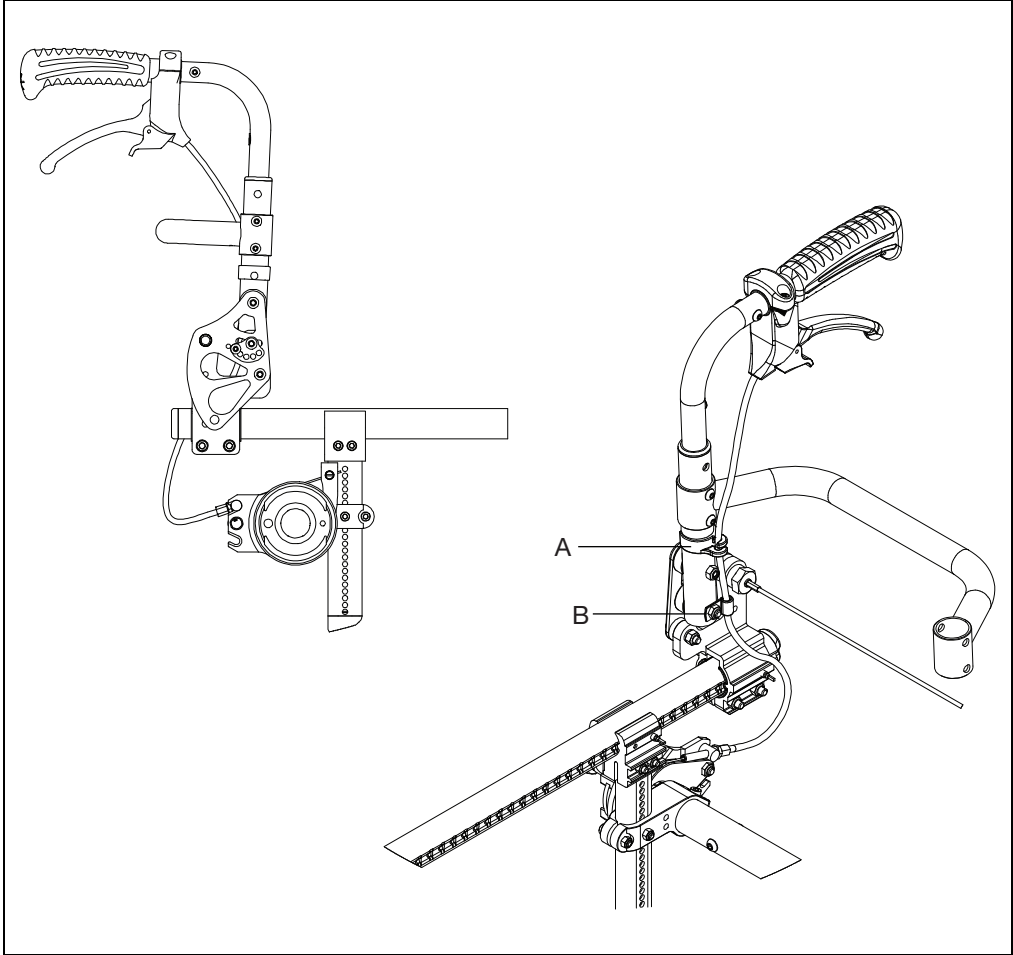
NOTE: Cable usage based on the configuration is shown in the tables below the image.



Cable Size for Backrest Type				
		Fixed Height	Height Adjustable	
			Ex Short & Short	Medium & Tall
Backrest Height	9	4XS	3XS	
	10	4XS		
	11	3XS		
	12	3XS		
	13	3XS		
	14	3XS	2XS	2XS
	15	2XS		
	16	2XS		
	17	2XS		
	18	2XS		

Drum Brake

7. Route the cable down the backrest cane to the drum brake.
8. Thread the end of the cable through the hole in the pinch bolt and tighten after removing all play from the cable.
9. Adjust cable until no wheel drag is present and positive lock is achieved with levers.
10. Secure cable to back cane and frame with cable clip (A) and P-Clip (B) as shown.

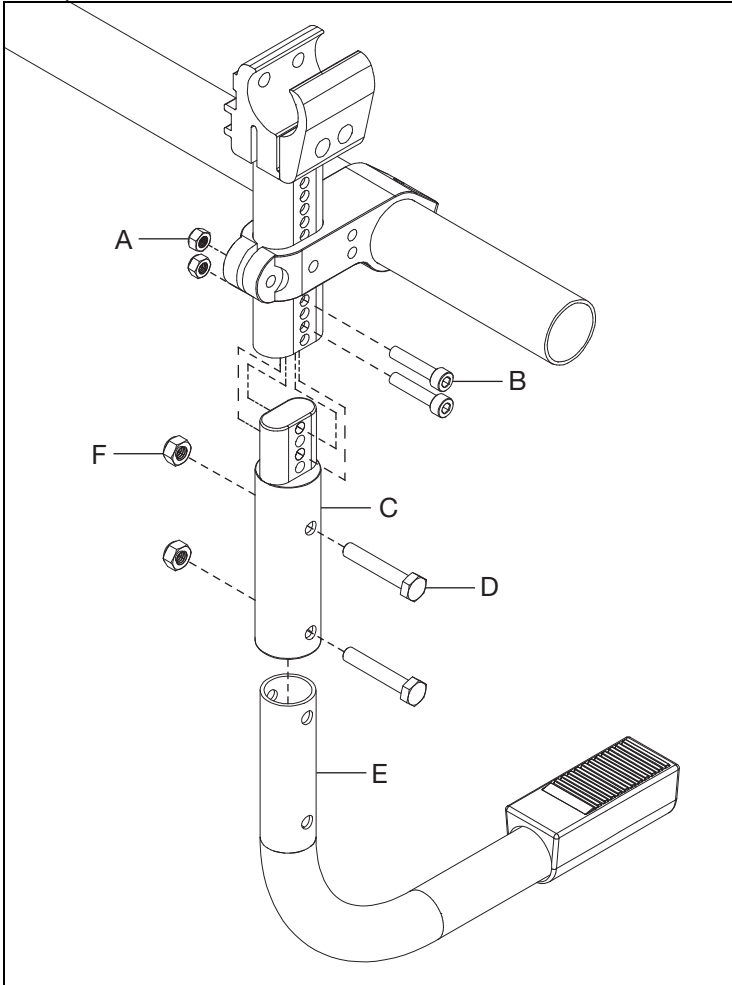


Tipping Lever

NOTE: Wheel size of 18 is a no go. Wheel sizes of 20 and 22 use the short tipping lever. Wheel size 24 uses the standard tipping lever size.

Click Tipping Lever

1. Install the tipping lever (E) to the tower adapter (C) with two bolts (D) and two nuts (F) using two 10mm wrenches.
2. Remove the end cap from the bottom of the tower and install the tipping lever assembly into the bottom of the tower with two bolts (B) and two nuts (A) using a 4mm Allen wrench and an 8mm wrench.
3. Repeat on opposite side.

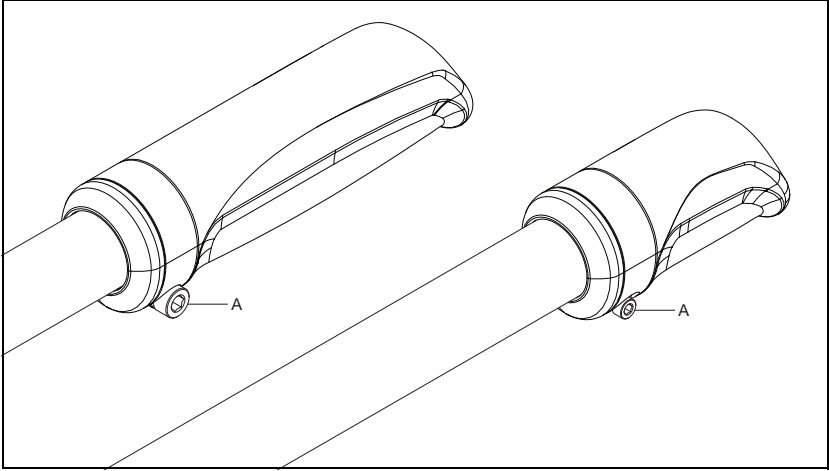


EZ Grip Assembly

1. Ensure any previous hand grips are removed and the handle is smooth and clean for install.
2. Install the EZ grip on to the handle by pushing onto the hand grip as far as grip will go.
3. Tighten bolt (A) on the grip collar with a 4mm Allen wrench to a minimum torque setting of 50 in-lbs, until grip is secure and does not rotate or remove when twisted and pulled.

NOTE: There are two sizes of EZ grips available, installation is the same for both sizes.

4. Repeat on opposite side.





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