

**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 "Arc"

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## TECHNICAL MANUAL



## **WARNING**

**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 Arc 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 Arc 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:

715-254-0991

In writing 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 it's 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.

<b>Arc</b>
Frame Tube
Seat Frame: 1"
Cross Brace Seat Tube: 7/8"
<b>Back Canes</b>
Fixed Height Back Canes: 1"
Lower Adjustable Height/Adjustable Handle: 1"
Upper Adjustable Height/Adjustable Handle: 7/8"
Removable Stroller Handle: 7/8"
Adjustable Rigidizer Bar: 7/8"
Reclining Back: 1"
<b>Arms</b>
Upper T-Arm: 7/8"
Transfer Tube T-Arm: 3/4"
Tubular Flip Up: 7/8"
Angle Adjustable Flip Up: 1"
<b>Footrests</b>
S/A Hanger: 1"
S/A Extension Tube: 3/4"
ELR Upper Hanger: 1"
Pediatric Pro and Pro ELR Hanger: 1"

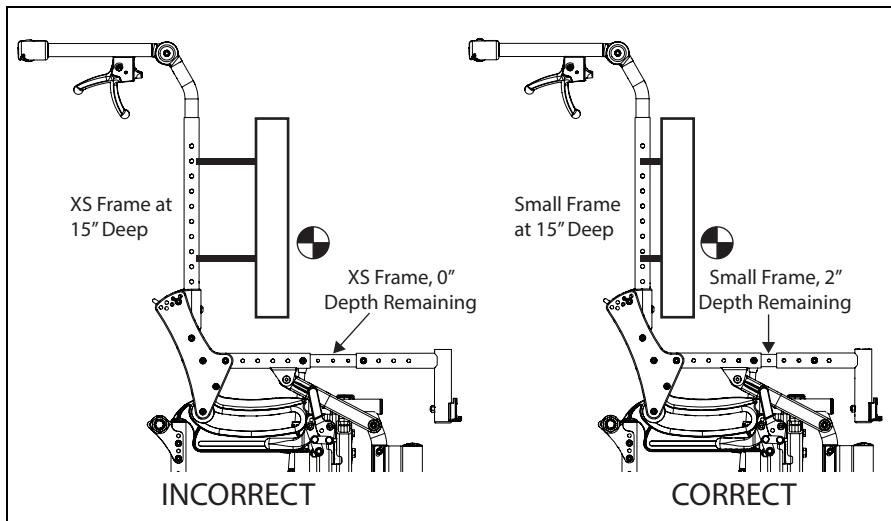
## Spoke Tension Values

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

# Setting Up Seat Depth

A common mistake accomodating growth on chairs such as the Arc that grow forward -

When the ATP specifies the depth configuration of a chair, they sometimes build in growth by unnecessarily placing the client significantly forward of the back canes by extending back mounting brackets or hardware. This practice puts the client weight forward in the chair making it harder to tilt and turn the chair. The ATP should place the back of the seating system as close to the back canes as possible and grow the chair forward (not move the seat back rearwards) by extending the seat tubes when growth is required.



# Seat Height - Configuration Charts

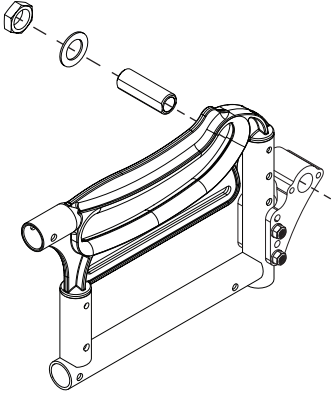
Front Seat Height								
Caster	Fork	Stem	Fork Hole					
			1	2	3	4	5	6
5"	5"	Std		14.5	15	15.5		
		Tall		16	16.5	17		
	6"	Std			15.5	16	16.5	17
		Tall			17	17.5	18	18.5
	7"	Std		16.5	17	17.5	18	
		Tall		18	18.5	19		
6"	6"	Std			15.5	16	16.5	17
		Tall			17	17.5	18	18.5
	7"	Std	16.5	17	17.5	18	18.5	
		Tall	18	18.5	19			
6X2	6W	Std	15.5	16	16.5	17		
		Tall	17	17.5	18	18.5		
	7W	Std	16.5	17	17.5	18	18.5	
		Tall	17.5	18	18.5	19		
7"	7"	Std	17	17.5	18	18.5	19	
		Tall	18.5	19				
8"	7"	Std		18	18.5	19		
8X2	7W	Std	17.5	18	18.5	19		
		Tall	18.5	19				

Rear Seat Height												
Axle Plate Orientation		Up						Down				
		1		2		3		1		2		3
Axle Plate Position		A	B	A	B	A	B	A	B	A	B	
Level		A	B	A	B	A	B	A	B	A	B	
Wheel Size	12" Poly								14.5	15	15.5	16
	12"							14.5	15	15.5	16	16.5
	16" Low Poly					14.5	15	15.5	16	16.5	17	17.5
	16" Drum Brake				14.5	15	15.5	16	16.5	17	17.5	18
	16"			14.5	15	15.5	16	16.5	17	17.5	18	18.5
	20"	15	15.5	16	16.5	17	17.5	18	18.5	19		

# Seat Height - Axle Diagram References

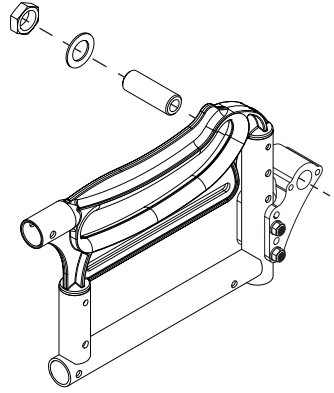
With the correct configuration determined from the charts above, use the diagrams below to identify axle bar angles, axle positions and the two type of axles.

## QR Axle Configuration



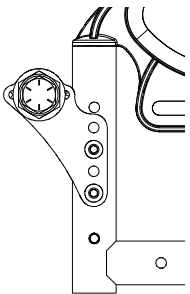
## Threaded Axle Configuration

\*Bolt and lock washer replace QR Axle when securing wheel.

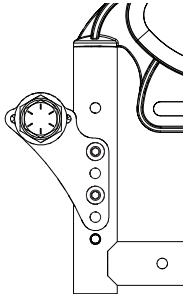


## Up Orientation

Level A

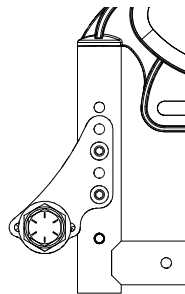


Level B

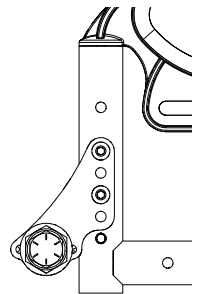


## Down Orientation

Level A

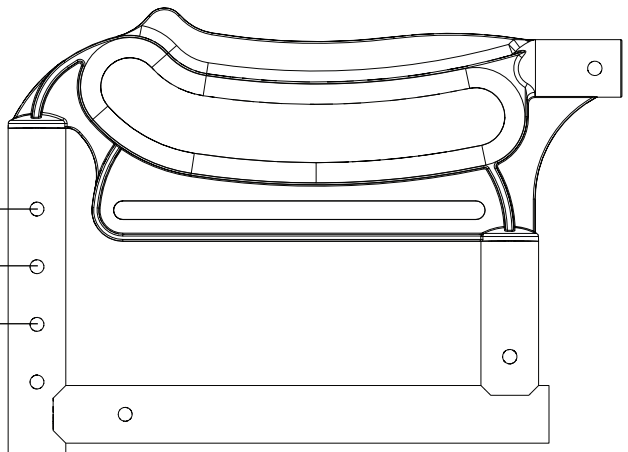


Level B



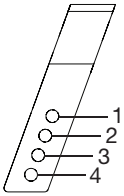
Axle Plate Position  
(Upper bolt of  
axle plate  
position)

- 1
- 2
- 3

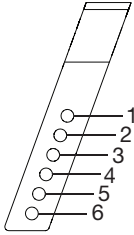


# Seat Height - Fork Diagram Reference

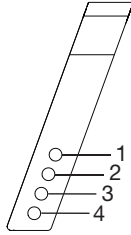
With the correct configuration determined from the charts above, use the diagrams below to identify the different fork sizes and the fork holes.



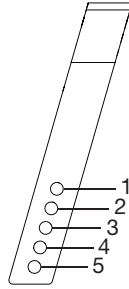
5" Standard



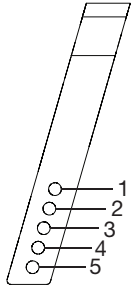
6" Standard



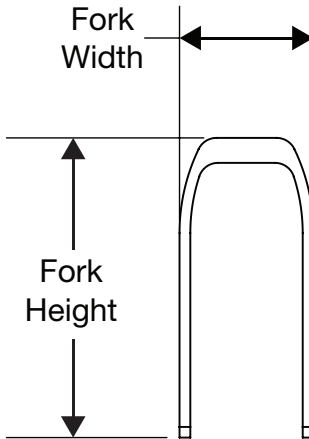
6" Wide



7" Standard



7" Wide

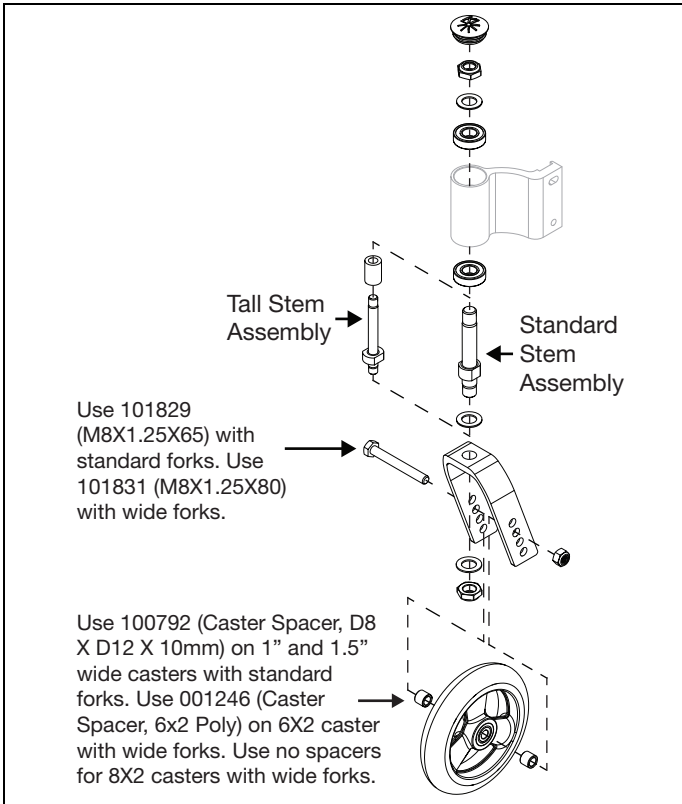


Fork	Height	Width
5" Standard	4.7"	2.1"
6" Standard	5.7"	2.1"
6" Wide	5.8"	2.9"
7" Standard	7.0"	2.1"
7" Wide	7.0"	2.9"



# Caster Construction

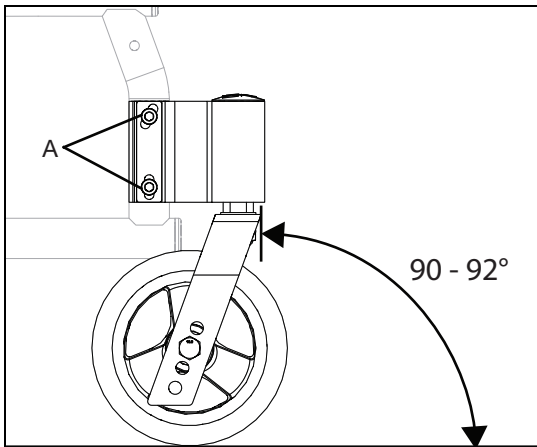
The caster assembly is shown below. Securing the caster wheel to the fork requires two 13mm wrenches. Securing the stem to the fork requires an 19mm wrench.



# Caster Adjustment

## 1. Adjusting Caster Position

- Using a 5mm Allen wrench and a 10mm wrench, loosen screws (A) and slide adjuster up or down.
- Retighten screws. Repeat for opposite side of chair.

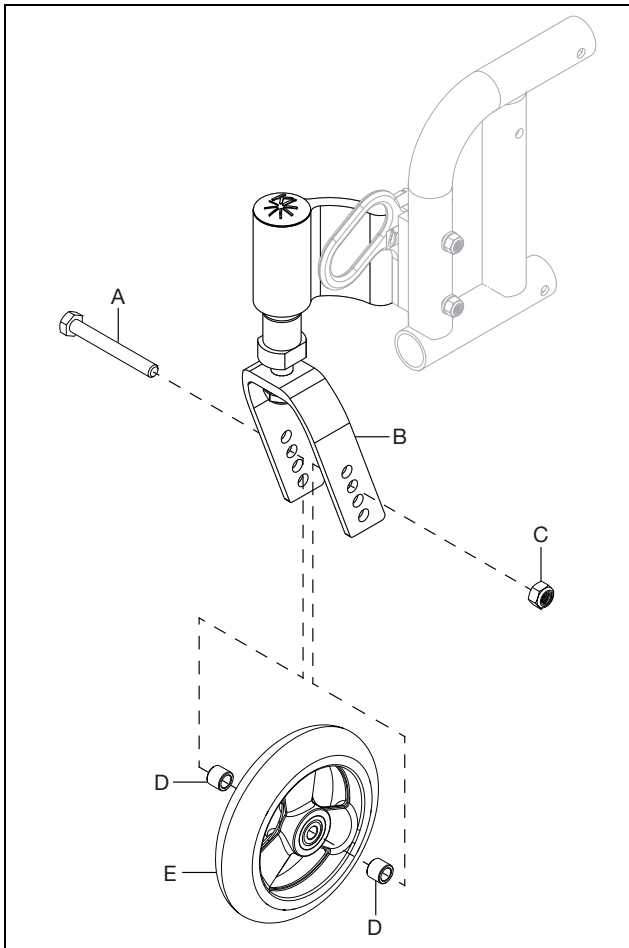


# Caster Adjustment

## 3. Adjusting Caster Height

- a. Remove hex bolt (A) and nut (C) using 13mm wrenches.
- b. Remove caster wheel (E) and spacers (D).
- c. Feed hex bolt (A) through desired hole in one side of the caster fork (B).
- d. Slide one spacer (D) over hex bolt (A).
- e. Slide caster wheel (E) over hex bolt (A) and push hex bolt through caster wheel, flush with the opposite side of the caster wheel bearing.
- f. Slide second spacer (D) between caster wheel (E) and caster fork (B), aligning spacer with bearing hole.
- g. Push hex bolt (A) through spacer (D) and hole in opposite side of caster fork (B).
- h. Retighten hex bolt (A) with nut (C).
- i. Repeat for opposite side of chair. Ensure both casters are set up identically.

**NOTE: 8X2 casters with wide forks will have no spacer.**

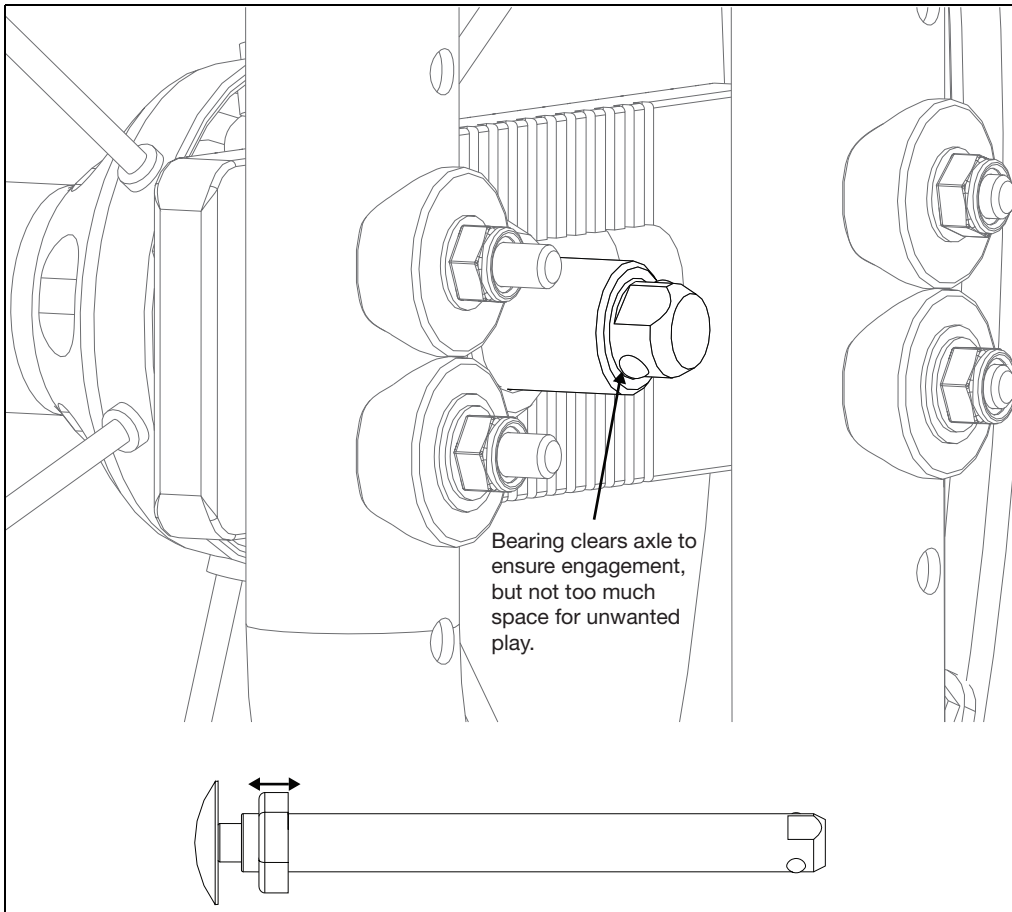


# Quick Release Axle Adjustment

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 .

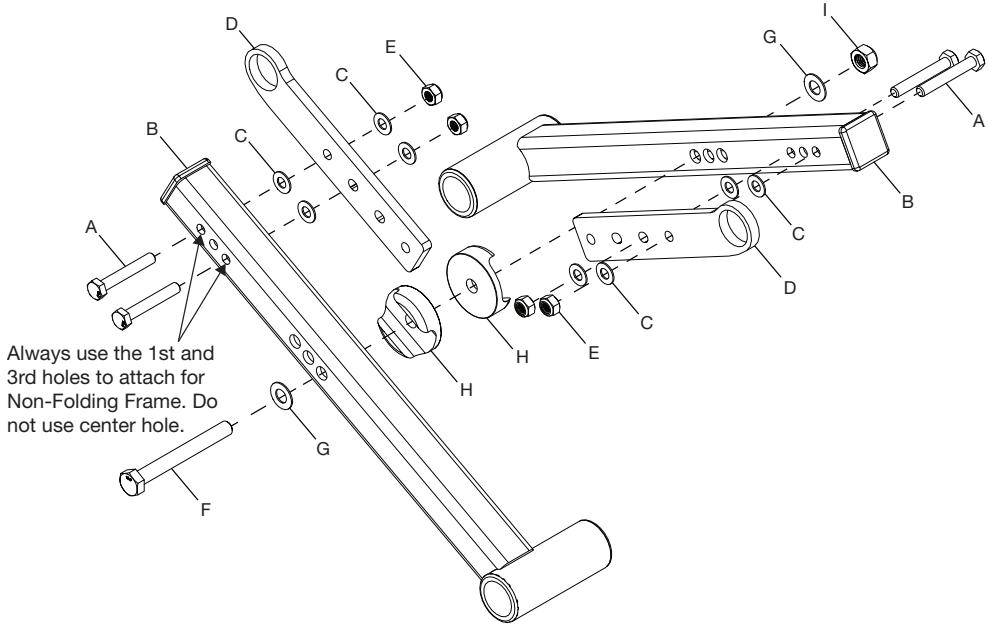


# Chair Width

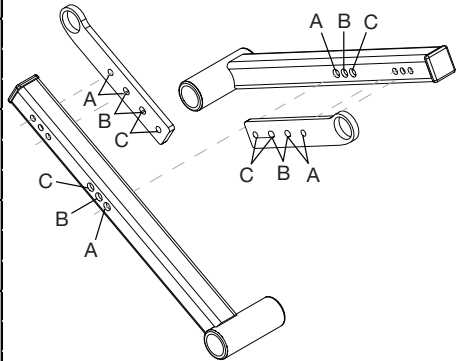
## Non-Folding Frame

**NOTE:** Adjusting the width also affects any seating, seat pan, rigidizer handle and rigidizer bar that may be present. See those corresponding sections, if applicable, for instructions on how to disassemble.

1. The crosstubes (B) are detached from the crosstube extensions (D) by removing the two bolts (A), four washers (C) and two nuts (E) using two 10mm wrenches.
2. The crosstubes (B) are detached from each other by removing the bolt (F), two washers (G), two saddles (H) and the nut (I) using two 13mm wrenches.
3. Reassemble the crosstube assembly using the diagrams and table below to achieve the desired width configuration.



Configuration	Hole Set to Align	Cross Tube	Cross Tube Extension
10W Small	A	Small	Small
11W Small	B		
12W Small	C	Medium	Medium
12W Medium	A		
13W Medium	B	Large	Large
14W Medium	C		
14W Large	A	XL	XL
15W Large	B		
16W Large	C		
16W XL	A		
17W XL	B		
18W XL	C		



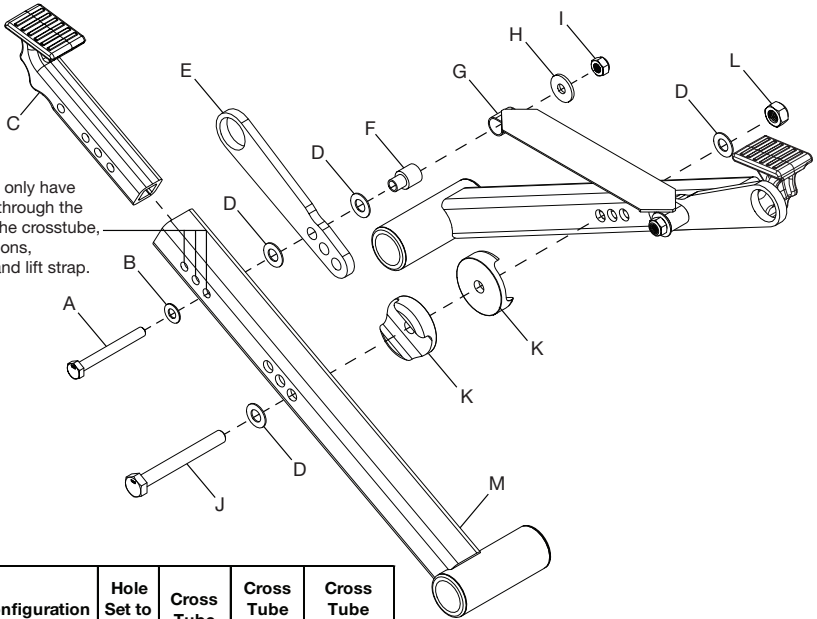
# Chair Width

## Folding Frame

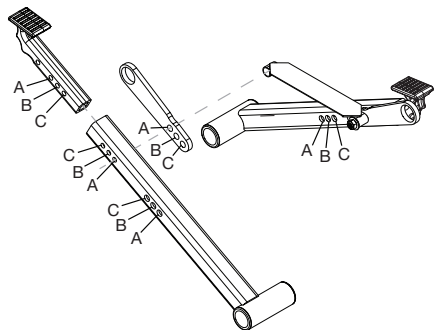
**NOTE: Adjusting the width also affects any seating, seat pan, rigidizer handle and rigidizer bar that may be present. See those corresponding sections, if applicable, for instructions on how to disassemble.**

1. The crosstubes (M) are detached from the crosstube extensions (C), lift strap (G) and crosstube hinges (E) by removing the bolt (A), four washers (B, D,H), hinge spacer (F) and nut (I) using two 10mm wrenches.
2. The crosstubes (M) are detached from each other by removing the bolt (J), two washers (D), two saddles (K) and the nut (L) using two 13mm wrenches.
3. Reassemble the crosstube assembly using the diagrams and table below to achieve the desired width configuration.

Folding frame will only have one bolt passing through the upper portion of the crosstube, crosstube extensions, crosstube hinge and lift strap.

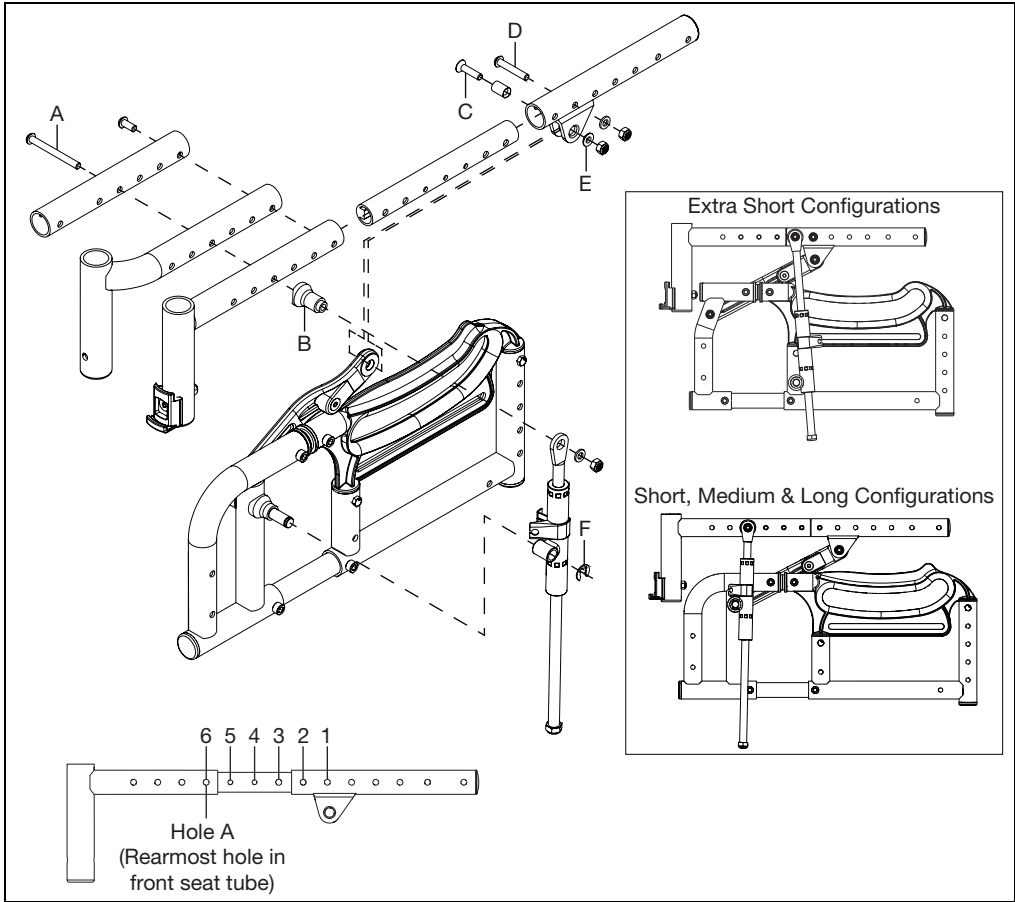


Configuration	Hole Set to Align	Cross Tube	Cross Tube Hinge	Cross Tube Extension
10W Small	A	Small	Small	Small
11W Small	B			
12W Small	C			
12W Medium	A	Medium	Medium	Medium
13W Medium	B			
14W Medium	C			
14W Large	A	Large	Large	Large
15W Large	B			
16W Large	C			
16W XL	A	XL	XL	XL
17W XL	B			
18W XL	C			



# Seat Depth

Use the chart and diagram below to set chair in desired seat depth. A 4mm Allen wrench and a 10mm wrench are needed for the hardware during this procedure.



## Hole A Alignment

Frame Size	Hole Location			
	3	4	5	6
Extra Short	12D	13D	14D	15D*
Short	14D	15D	16D	17D
Medium	16D	17D	18D	19D
Long	18D	19D	20D	

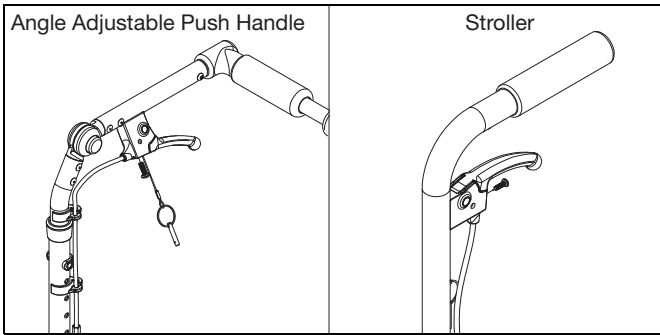
## Component Hole Locations

Components	Extra Short Frame				Short, Medium & Long
	12D	13D	14D	15D*	All Depths
Callout B, F, C & E	2	2	2	2	6
Callout D	Hole A	Hole A	Hole A	Not Needed	Not Needed
Callout A, C & E	1	1	1	6	2

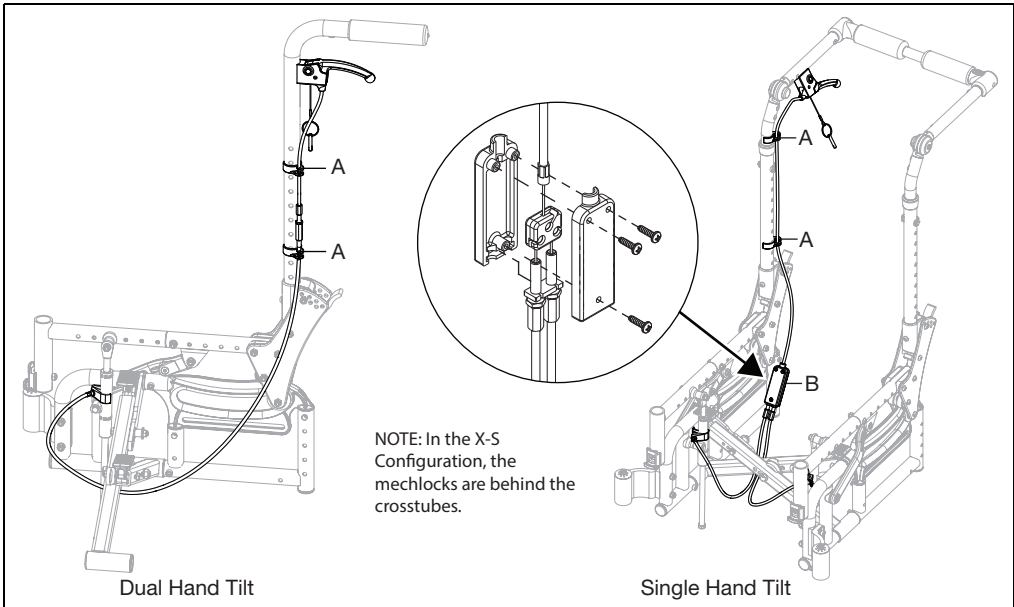
\*N/A with offset hangers or contracture footrest

# Hand Tilt

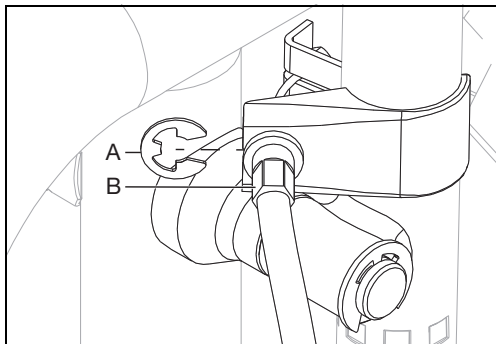
1. Install hand trigger onto back post using a Phillips screwdriver and the diagram below.



2. Route cable as shown below. Install cable clips (A) along back post to keep cable in place.

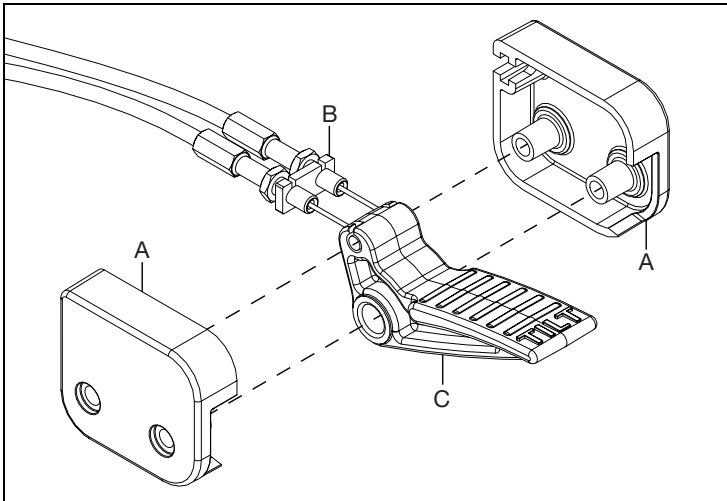


3. Attach end of cable to mechlock as shown below. The cable adjuster (B) on the end of the cable is loosened to attach cable in the brackets. Once attached, adjust the cable by turning the adjuster (B). Secure cable by also installing E-Clip (A).



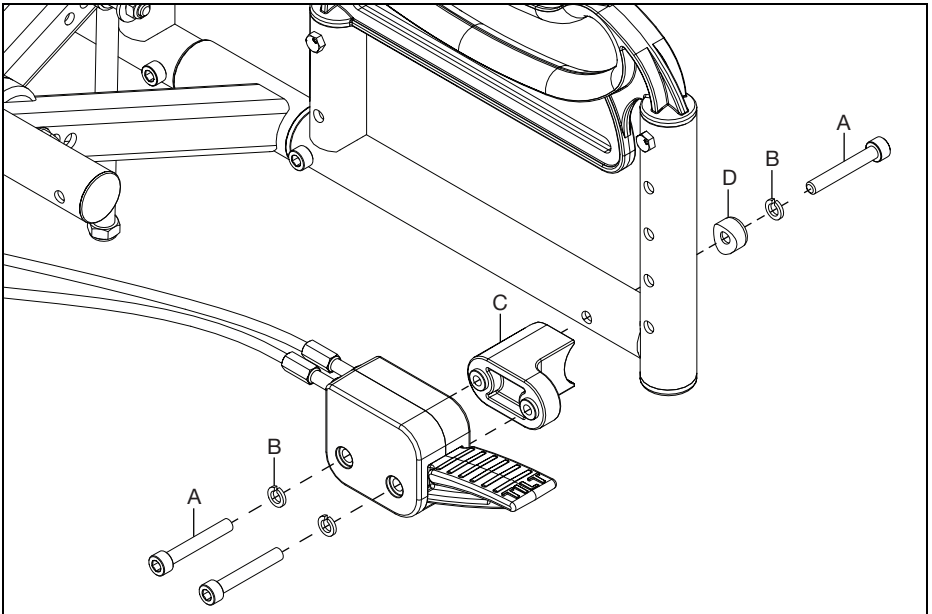
## Foot Tilt

1. Install the two cable ends into the cable nut plate (B).
2. Insert the barrel ends of the cables into the pockets of the pedal (C).
3. Close the housing (A) around the foot pedal/cable assembly.



4. Install the foot pedal/cable assembly to the inside frame of the chair with two bolts (A), two lock washers (B), foot tilt mount (C) and saddle (D) using two 5mm Allen wrenches.

**NOTE: A foot tilt mount can be installed on the left or right side of the chair, based on user preference.**

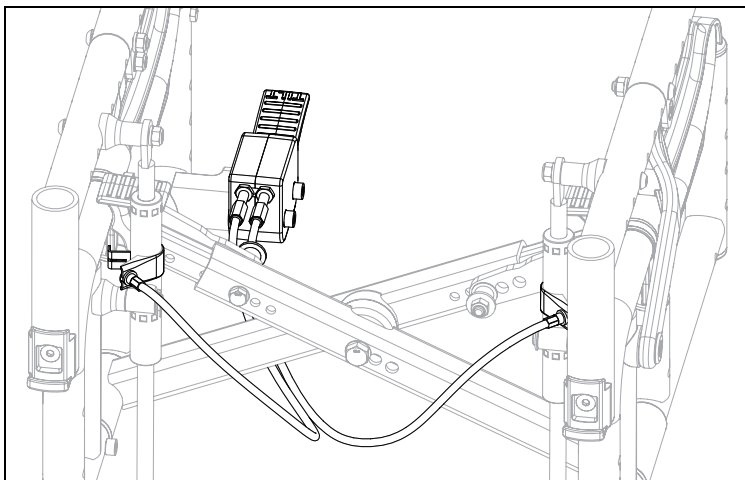




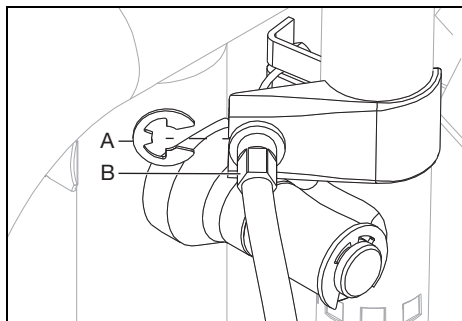
# Foot Tilt

5. Route the cables as shown below.

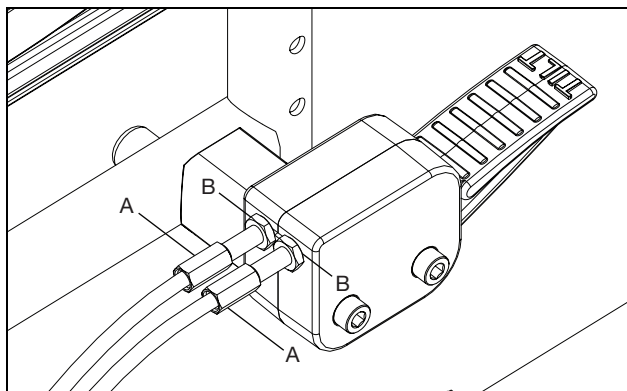
**NOTE: The cables are routed below the folding cross braces, as shown below, with short, medium and long configurations.**



6. Attach end of cable to mechlock as shown below. The cable adjuster (B) on the end of the cable is loosened to attach cable in the brackets. Once attached, adjust the cable by turning the adjuster (B). Secure cable by also installing E-Clip (A).

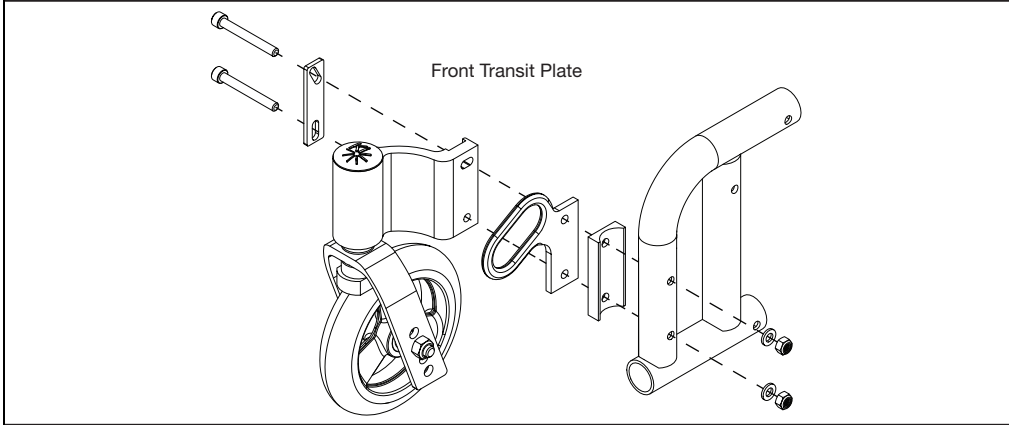
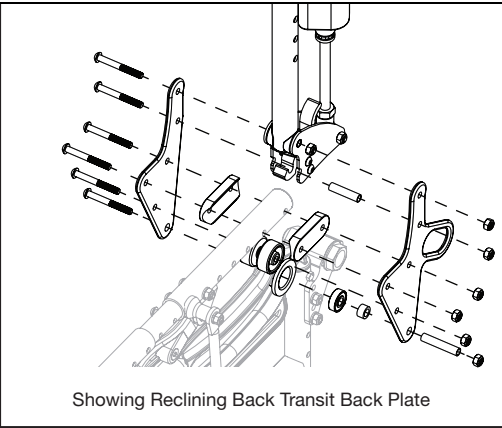
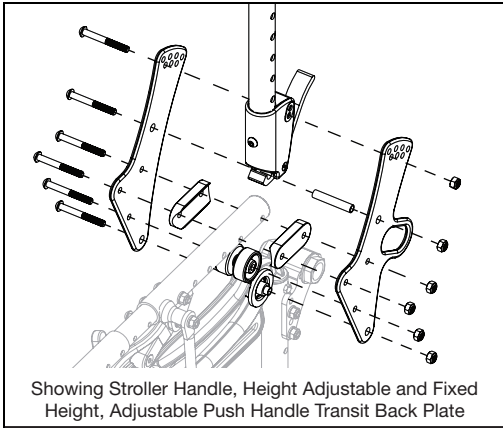


7. Adjust both cables after installation by turning the threaded adjusters (A). Lock into place by tightening the jam nut (B). Test the foot tilt operation, with no one in the chair, and adjust further if needed.

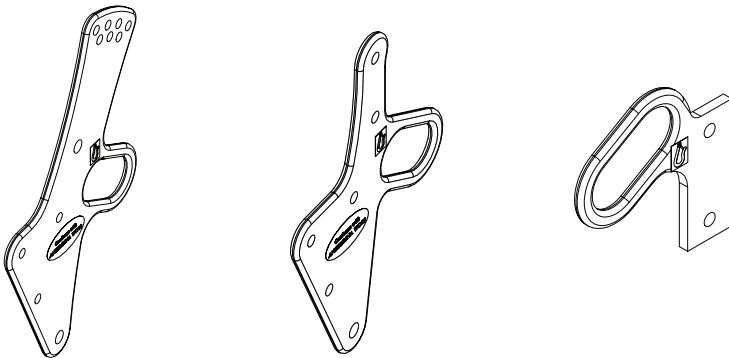


# Transit

See the diagrams below for transit system installation. A 4mm Allen wrench and a 10mm wrench are needed for the folding back hardware. A 4mm Allen wrench, 5mm Allen wrench, 10mm wrench and 13mm wrench are needed for the standard back hardware. To install the front brackets, use a 5mm Allen wrench and a 10mm wrench.



Transit hook and WC-19 labels must be attached as shown.



# Anti-Tip

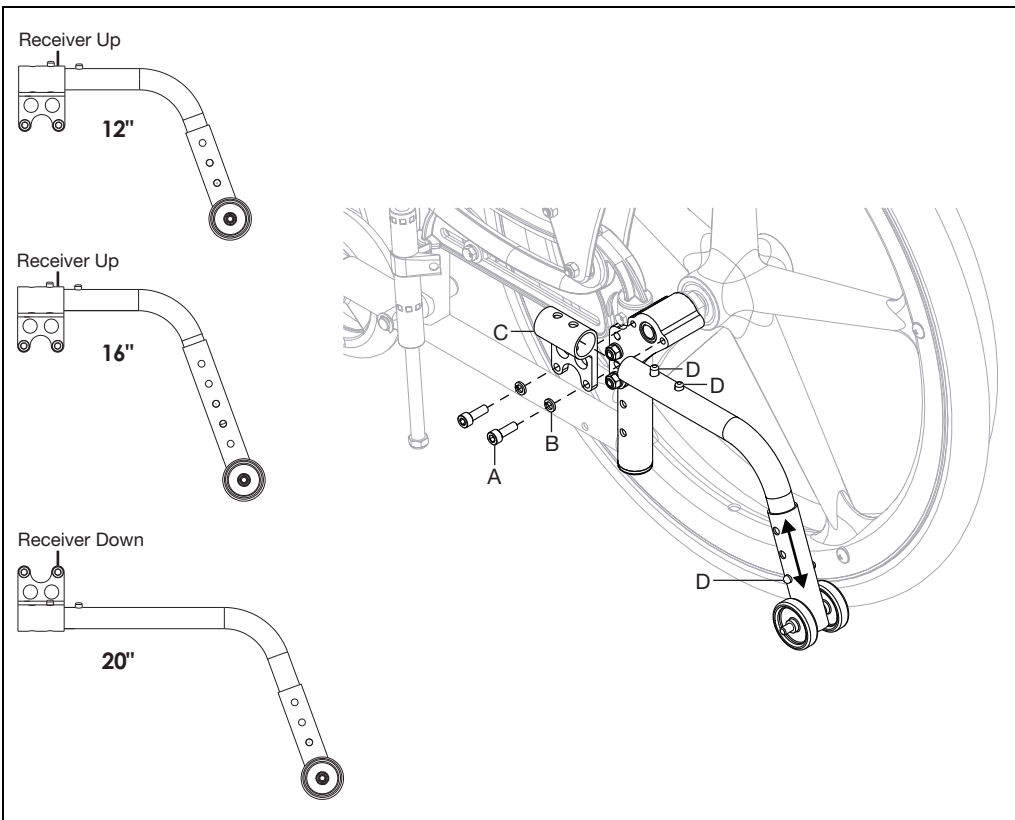
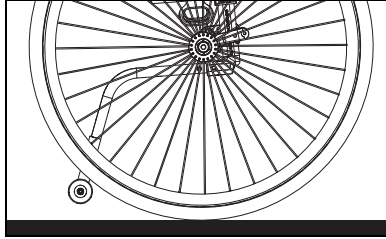
1. Install the anti-tip receiver (C) to the axle plate with two bolts (A) and two lock washers (B) using a 5mm Allen wrench.

**NOTE: The receiver is installed in the up position, as shown below, on 12" and 16" configurations. The receiver is installed in the down position, as shown below, on the 20" configuration.**

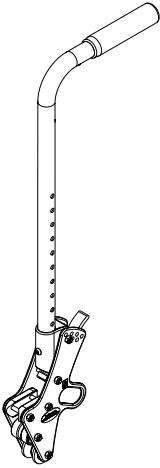
2. Install the anti-tip assembly into the receiver by pushing the upper indent buttons (D) down and sliding the assembly into the receiver. The indent buttons will lock into place when properly aligned in the receiver holes.

**NOTE: The height of the anti-tip can be changed by pushing the lower indent button (D) down and sliding the anti-tip tube up or down. Ensure the indent button locks into one of the tube holes. The anti-tip should be set to achieve a 1.5" - 2" gap between the anti-tip wheel and the ground.**

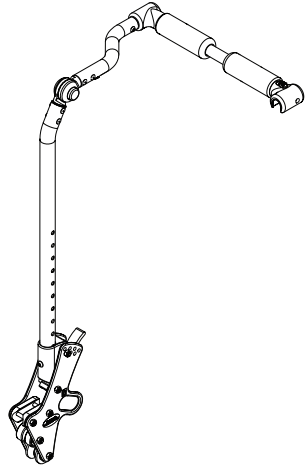
**NOTE: After any adjustment, ensure anti-tips clear the wheels as shown below.**



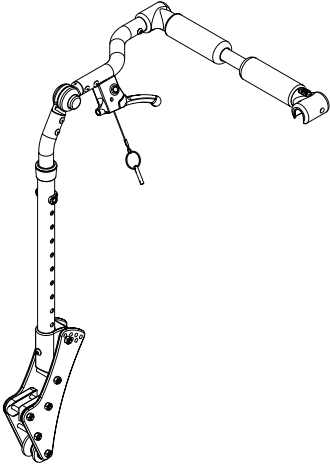
# Back Height



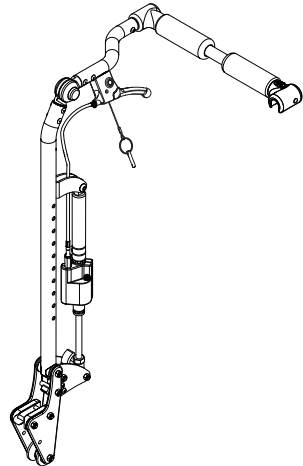
Stroller Handle Backrest - Available with Short (20") and Tall (24") back canes.



Fixed Height Adjustable Handle Backrest - Available with Short (22") and Tall (26") back canes.



Height Adjustable Backrest - Available in Short (18"-25") and Tall (20"-27").

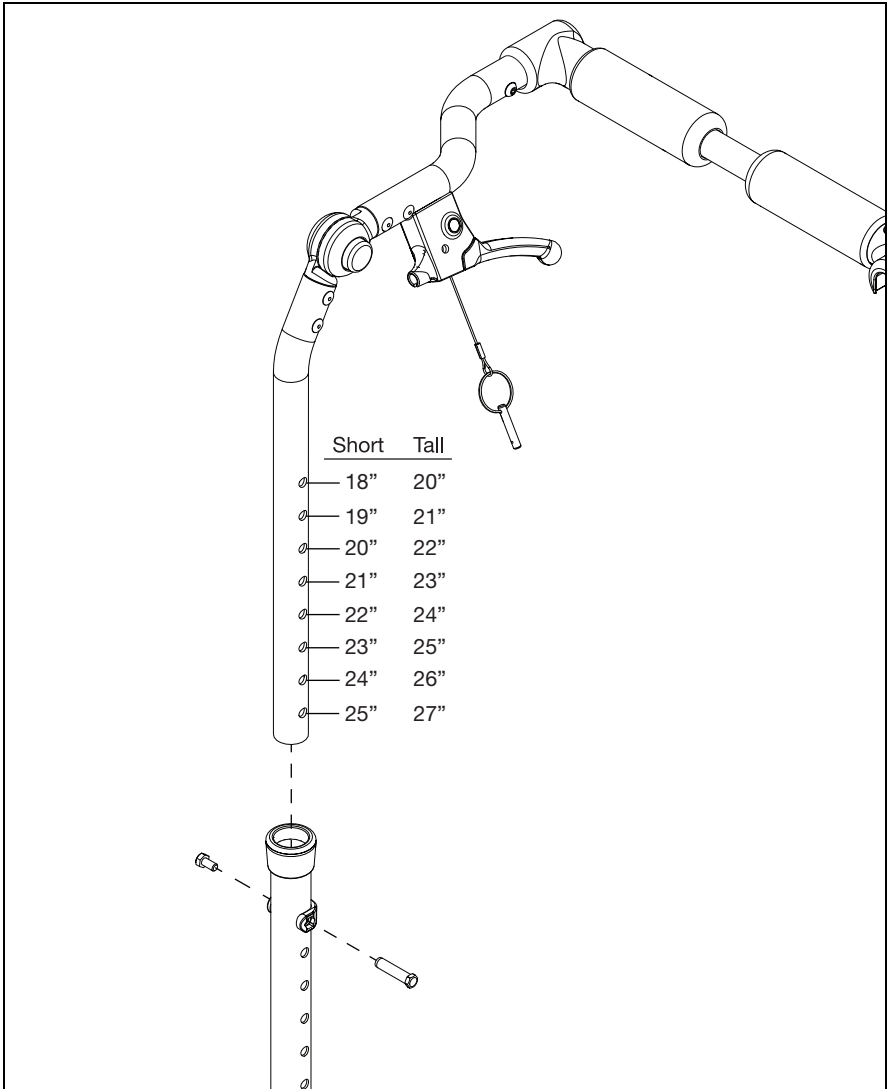


Reclining Backrest - Available with Short (22") and Tall (26") back canes.

# Back Height

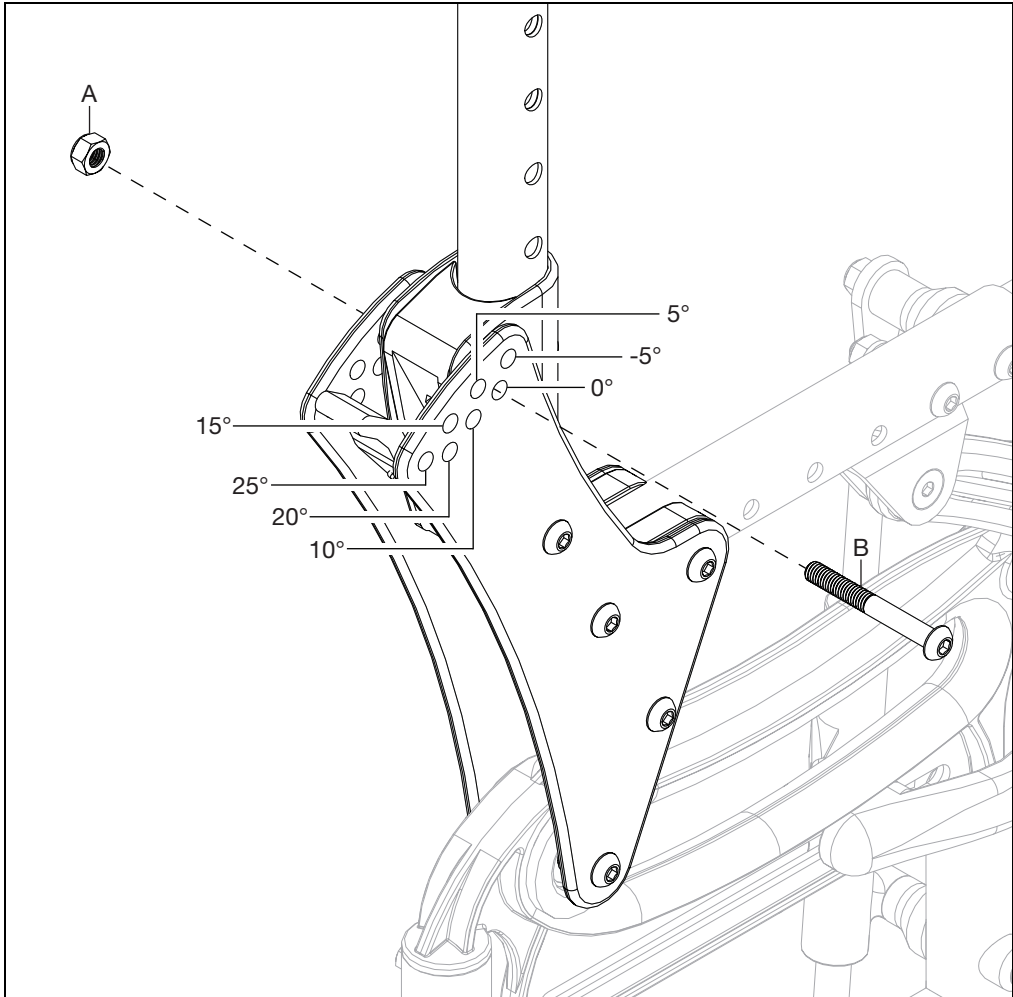
Back Post	Height Range	Back Height																
Stroller Handle Back Post	Short	20"																
	Tall	24"																
Fixed Height Adjustable Handle Backrest	Short	22"																
	Tall	26"																
Height Adjustable Backrest	Short	18"									19"	20"	21"	22"	23"	24"	25"	
	Tall	20"									21"	22"	23"	24"	25"	26"	27"	
Reclining Backrest	Short	22"																
	Tall	26"																

The Adjustable Height backrest is adjustable using an 8mm wrench. See the diagram below.



# Backrest Angle Adjustment

1. Use a 4mm Allen wrench and a 10mm wrench to remove the button head screw (B) and nut (A) on the backrest.
2. Rotate backrest to desired angle. Each hole represents 5° of rotation. See diagram below for the angle for each hole.
3. Replace screw and nut in desired hole location.
4. Repeat for opposite side. Ensure both sides use the same configuration settings.



# Folding Reclining Backrest

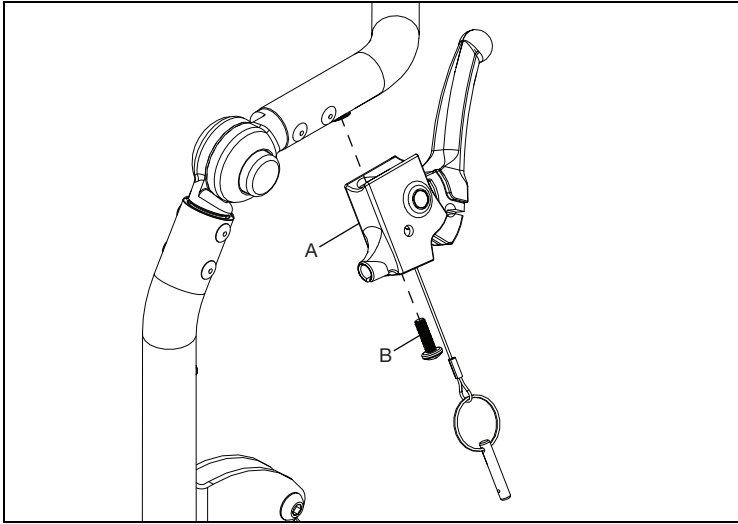
**NOTE:** Remove existing backrest canes and backplates from chair before beginning.

**NOTE:** Installing a reclining backrest changes the center of gravity with your chair and requires different adjustments to account for the changes. Always check the center of gravity and make adjustments as needed.

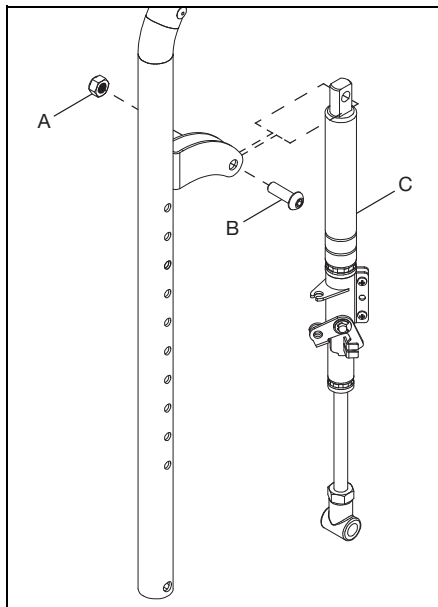
**NOTE:** The rigidizer handle assemble is used on the reclining backrest. See the Rigidizer Handle Assembly section on instructions on how to install.

## Installation

1. Install recline lever (B) to backrest cane with screw (A) using a #2 Phillips screwdriver. Repeat on opposite side.



2. Install gas spring lock (C) onto the back cane with a screw (B) and nut (A) using a 5mm Allen wrench and a 13mm wrench.

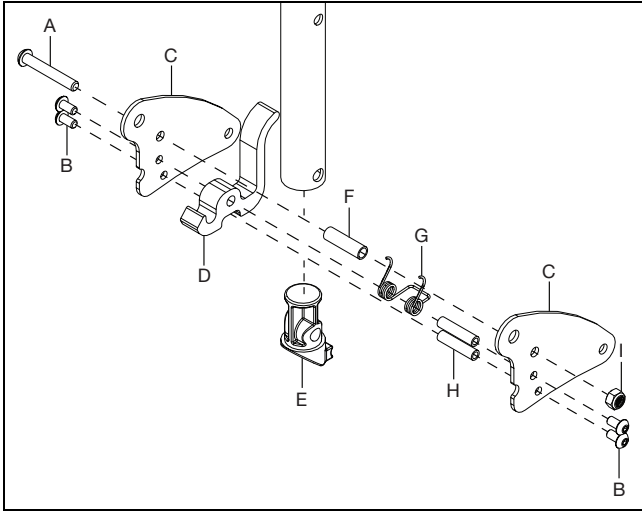


# Reclining Backrest

3. Install adapter plates (C) and recline latch (D) with five bolts (A & B), three spacers (F & H), spring (G) and a nut (I) using two 3mm Allen wrenches and a 4mm Allen wrench with 10mm wrench.

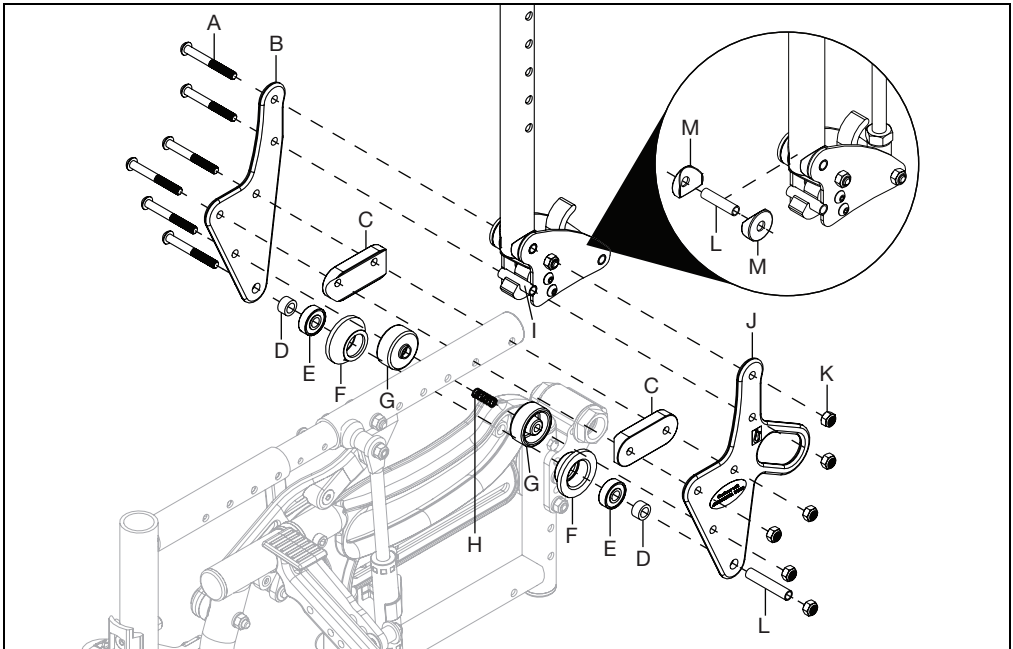
**NOTE: The spring (G) saddles the recline latch (D).**

4. Install the back tube plug (E) into the backrest tube.



5. Install the backplates (B & J) to the adapter plate assembly and frame with six bolts (A), two short spacers (D), two bearings (E), two bearing liners (F), two upper rollers (G), spring (H), two saddles (M), two dual saddles (C), three spacers (L & I) and six nuts (K) using a 5mm Allen wrench and a 10mm wrench.

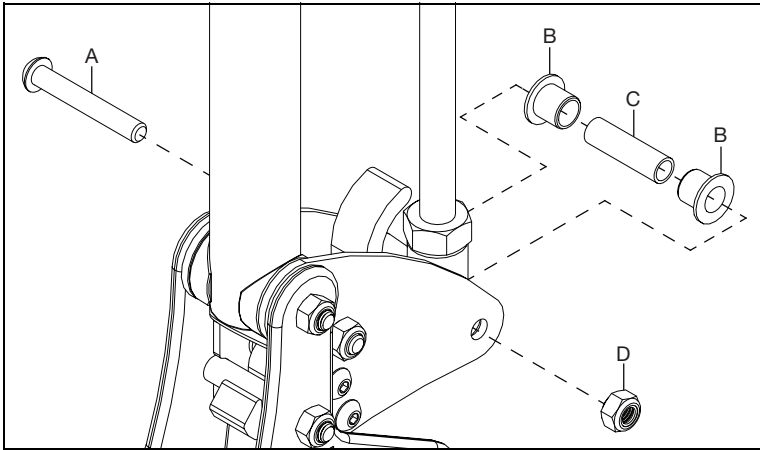
**NOTE: The inner back plate (J) shown is the transit version as an example. The installation is the same for transit and standard inner back plates.**



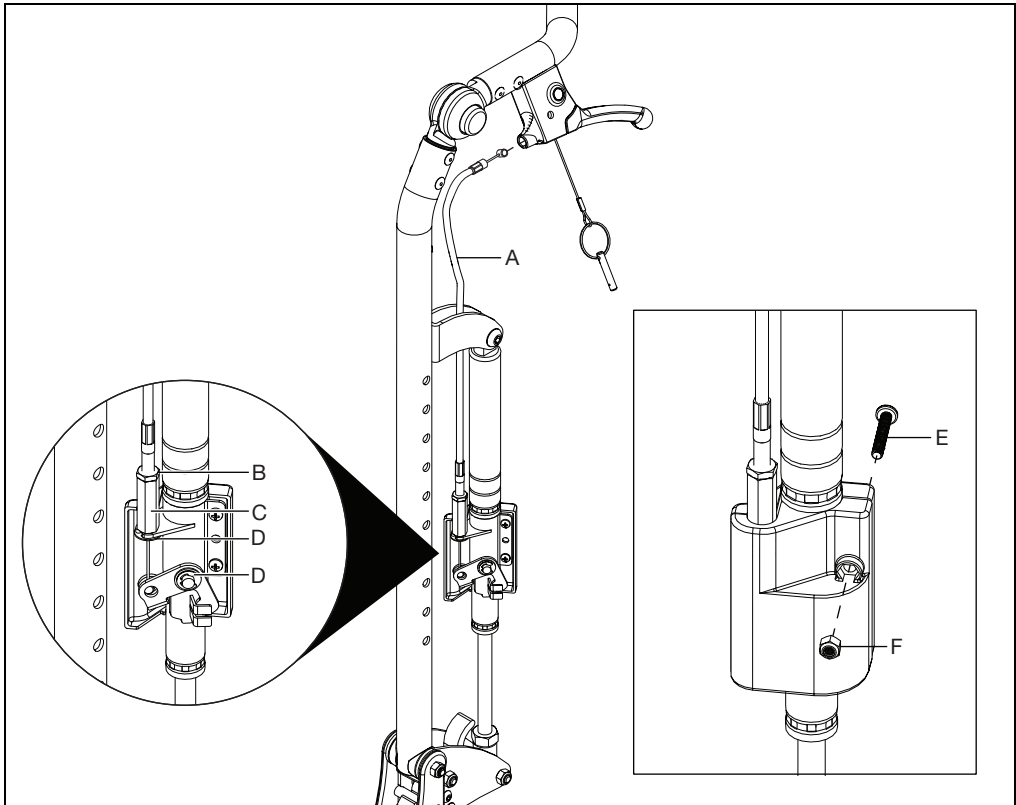


# Reclining Backrest

6. Secure the gas spring assembly to the adapter plate with a bolt (A), two flange bearings (B), spacer (C) and nut (D) using a 5mm Allen wrench and a 10mm wrench.

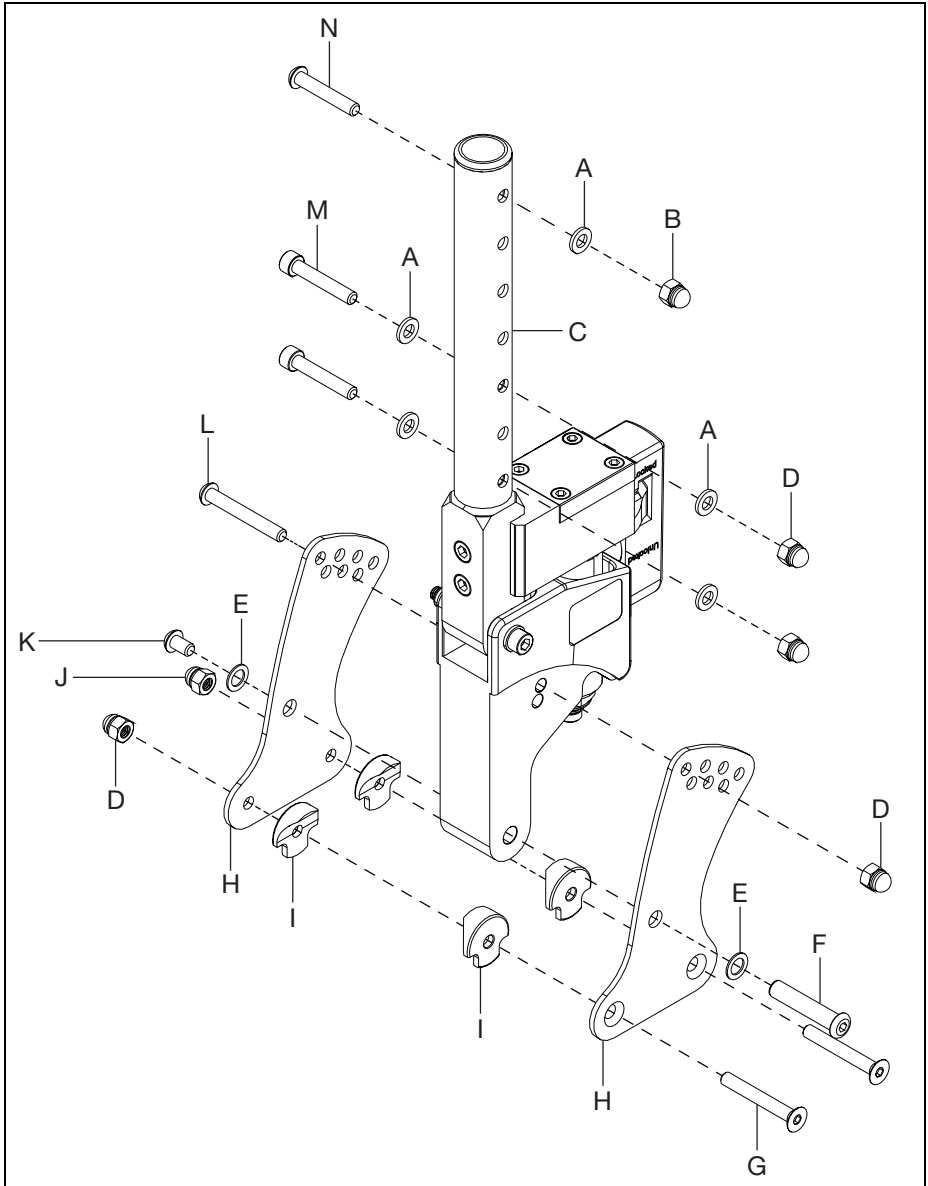


7. Install trigger cable (A) into trigger. Install opposite end through gas spring bracket and secure in place with E-Clip (D). Ensure second E-Clip (D) is also in place as shown in the image below. Tighten cable by loosening jam nut (B) and then turning the cable adjustment barrel (C). Verify trigger works properly and retighten jam nut to secure in place. Close gas spring cover and secure with screw (E) and nut (F) using a Phillips head screwdriver.



# Dynamic Back

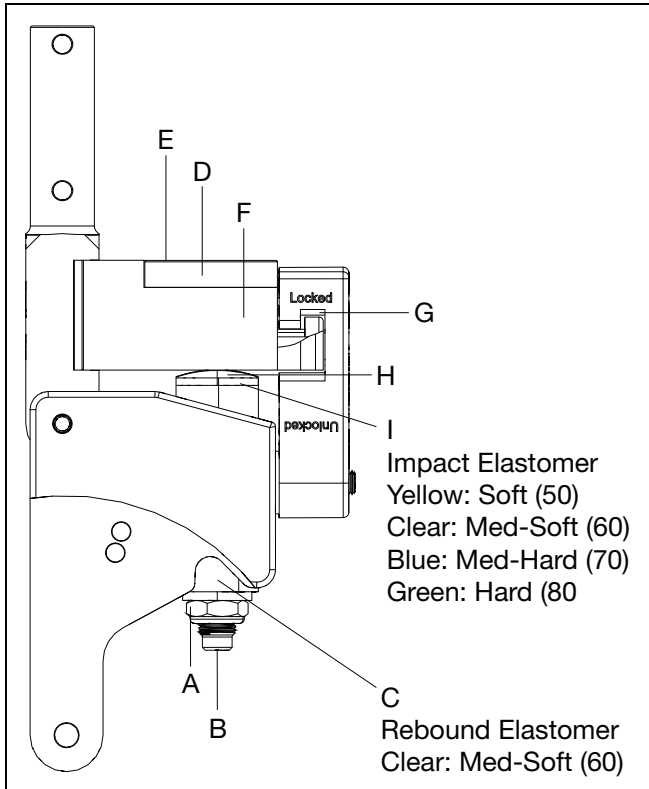
1. Install the back plates (H) onto the dynamic back using three bolts (F, K & L), two washers (E) and one nut (D) using a 5mm Allen wrench and a 10mm wrench.
2. Install the back plates onto the frame using two bolts (G), four saddles (I) and two nuts (D) using a 5mm Allen wrench and a 10mm wrench. The depth of the backrest is determined when determining the holes that will be used to install the dynamic back assembly to the frame.
3. Install the dynamic back tube (C) onto the top of the rocker back assembly with two bolts (M), four washers (A) and two nuts (D) using a 5mm Allen wrench and a 10mm wrench.
4. The backrest is attached onto the top of the dynamic back tube with a sleeve and then secure with bolt (N), washer (A) and nut (B) using a 5mm Allen wrench and a 10mm wrench.
5. Repeat on opposite side.



# Dynamic Back

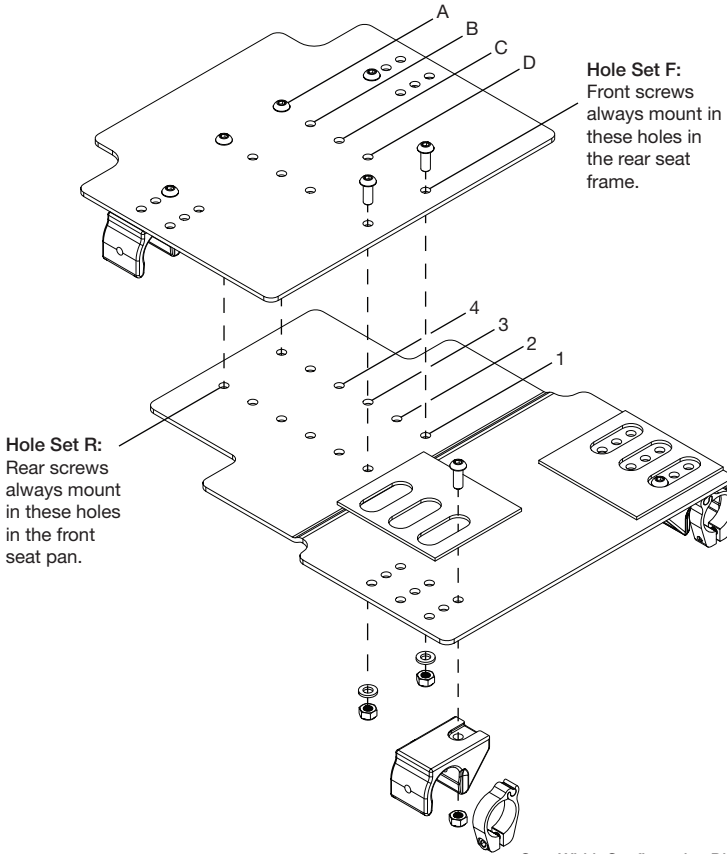
## Elastomer Replacement

1. Remove the lock nut (A) from the actuator rod (B). The rebound elastomer (C) may fall out of the pocket.
2. Remove the cover plate (D) by removing the four M5x12 socket head screws (E) securing the cover plate of the actuator arm (F). After removing the cover plate, remove the actuator rod from the actuator arm. Open the latch (G) by rotating the arm downward. The back is now free to fold forward, exposing the impact cap (H) and impact elastomer (I).
3. Remove the impact elastomer, remove the impact cap from the top of the impact elastomer and place the impact cap onto the new impact elastomer.
4. Place the new impact elastomer into the pocket, return the back to an upright position, place the actuator rod through the actuator arm, impact elastomer and housing. Place the rebound elastomer into its pocket and over the actuator rod. Replace the flat washer and lock nut onto the actuator rod. Return the latch to the closed and latched position. Tighten the lock nut until it compresses the rebound elastomer, pulling the actuator arm downward so that: (1) the latch operates freely and clicks into the indent, and, (2) the space between the housing, the actuator arm, and the latch plate to the rear of the actuator arm, is uniform top to bottom.
5. Reinstall the cover onto the actuator arm with the four screws. Tighten the screws and check to make sure the latch operates freely. If it does not, adjust the lock nuts as required, when properly adjusted you should be able to see a small and uniform amount of daylight between the interlocking surfaces of the latch and both the housing and actuator arm.



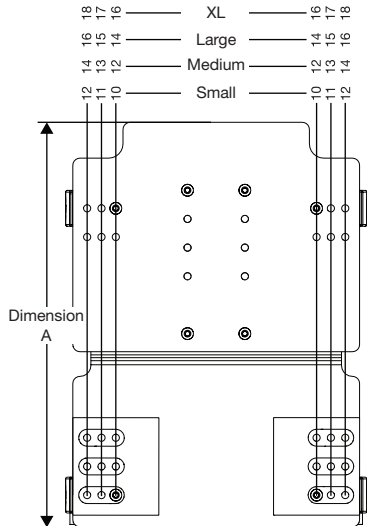
# Removable Seat Pan

See the diagram below for a seat pan installation. A 5mm Allen wrench and a 10mm wrench are needed for this procedure.



Frame Size	Seat Depth	Dimension A	Align Hole Set F in Rear Seat Pan with Hole Set in Front Seat Pan:	Align Hole Set R in Front Seat Pan with Hole Set in Rear Seat Pan:
Small	12D	12.11	1	A
	13D	13.11	2	B
	14D	14.11	3	C
	15D	15.11	4	D
Medium	14D	14.11	1	A
	15D	15.11	2	B
	16D	16.11	3	C
	17D	17.11	4	D
Large	16D	16.11	1	A
	17D	17.11	2	B
	18D	18.11	3	C
	19D	19.11	4	D
XL	18D	18.11	1	A
	19D	19.11	2	B
	20D	20.11	3	C

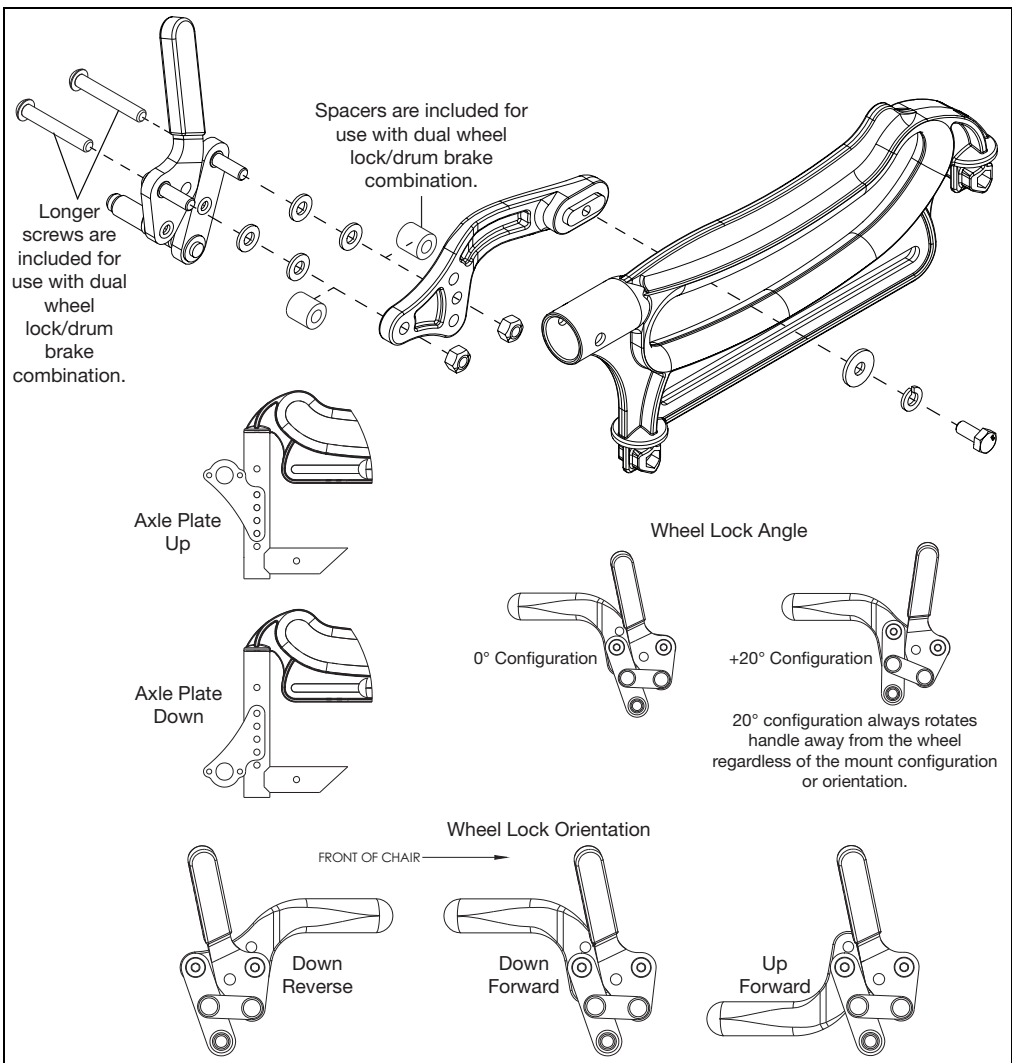
Seat Width Configuration Diagram



# Wheel Lock Configurations

Use the chart and diagrams below to determine the set up needed for a wheel lock on your chair. The assembly is also shown below and requires a 10mm wrench. The bolt attaching the wheel lock to the frame must be tightened to 144 in/lbs. Always test a wheel lock with no user in the chair.

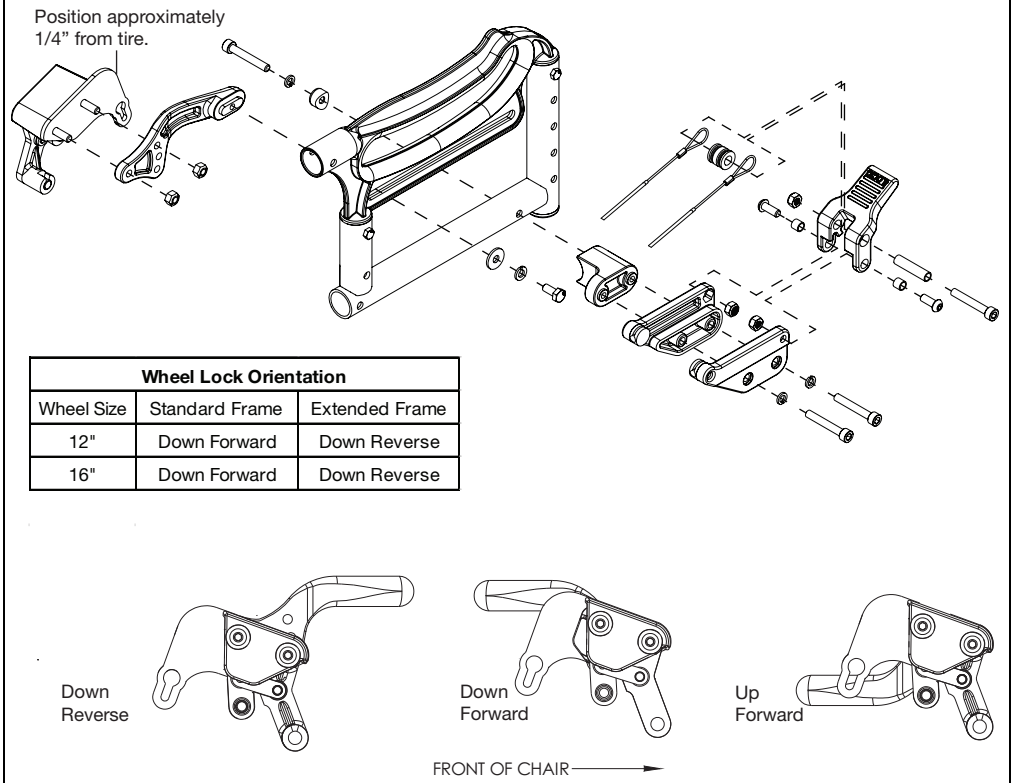
Wheel Size	Axle Plate Orientation	Standard Frame		Extended Frame	
		Orientation	Angle	Orientation	Angle
12"	Down	Down Forward	0°	Down Reverse	0°
16"	Up	Down Forward	+20°	Down Reverse	+20°
	Down	Down Forward	0°	Down Reverse	0°
20"	Up	Up Forward	0°	Down Forward	+20°
	Down	Up Forward	0°	Down Forward	0°



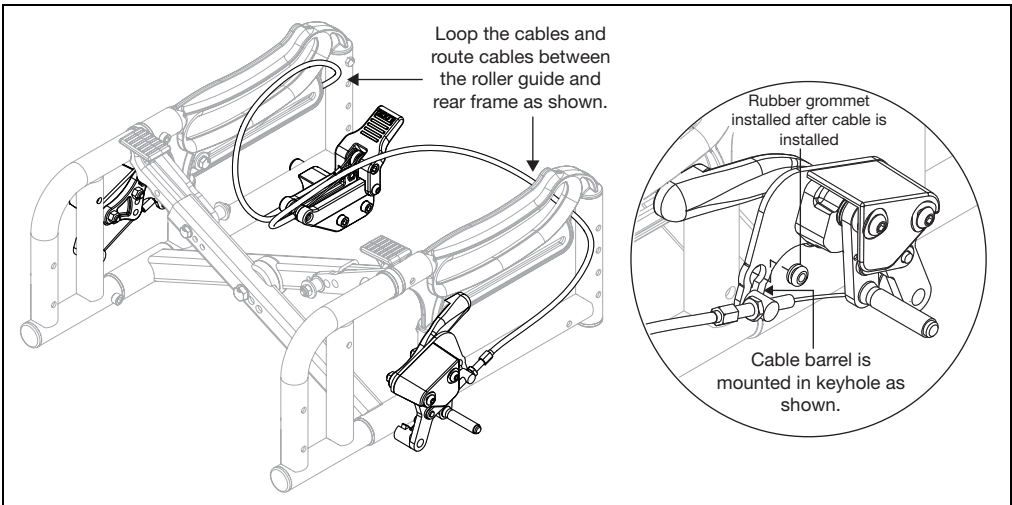
# Attendant Foot Lock

A diagram of the attendant foot lock assembly is shown below. The tools needed are a 10mm wrench, 4mm Allen wrench and a 5mm Allen wrench. An image of the cable routing and adjusting procedure is also shown below.

## Attendant Foot Lock Assembly Diagram



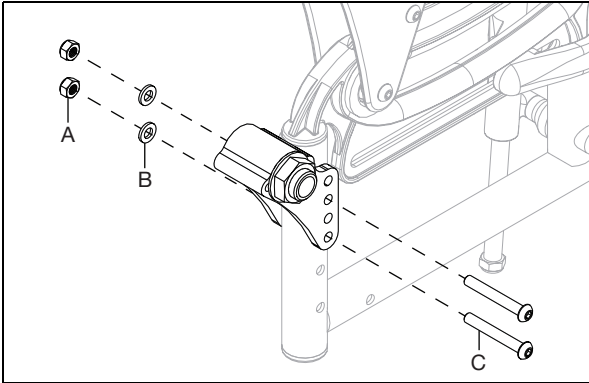
## Attendant Foot Lock Cable Routing and Adjusting Diagram



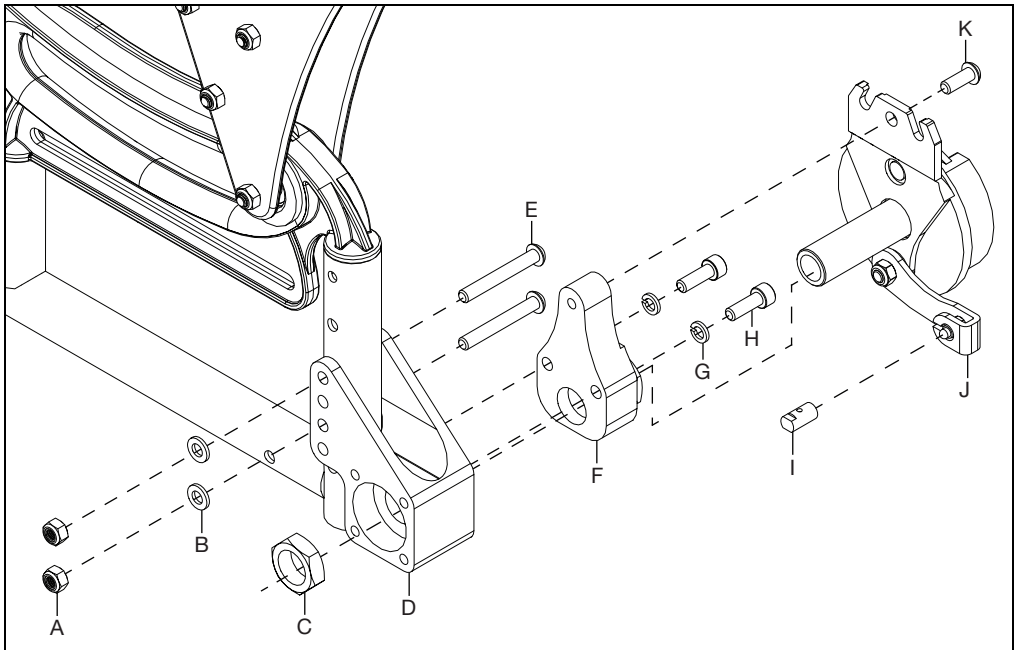
# Drum Brake

## Drum Brake Installation

1. Remove both wheels.
2. Remove the axle plate by removing two screws (C), two washers (B) and two nuts (A) using a 4mm Allen wrench and a 10mm wrench. Repeat on opposite side.



3. Install the drum brake axle plate (D) onto the frame with two screws (E), two washers (B) and two nuts (A) using a 4mm Allen wrench and a 10mm wrench.
4. Install the drum brake adapter (F) onto the axle plate with two screws (H) and two lock washers (G) using a 5mm Allen wrench.
5. Install the drum brake rotor (J) into the drum brake adapter and drum brake axle plate with one screw (K) using a 4mm Allen wrench.
6. Thread the hex nut (D) onto the end of the drum brake rotor using an adjustable wrench. Thread the pinch bolt (I) into the end of the drum brake rotor arm.
7. Install new rear wheels and quick release axle.



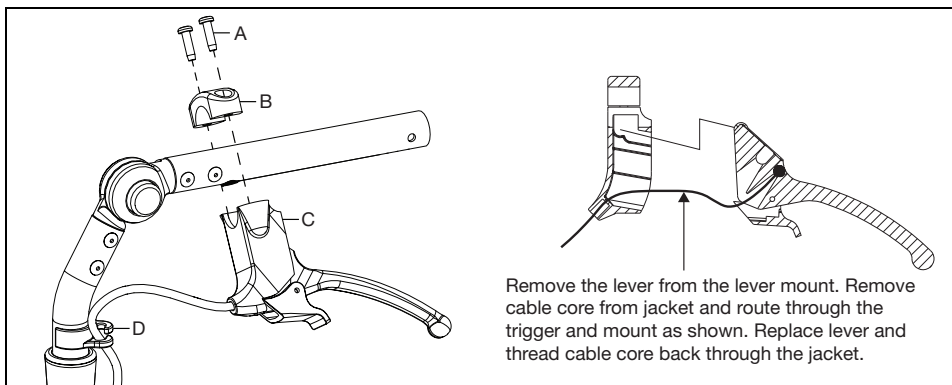
# Drum Brake

8. Install the cable into the lever as shown below.
9. Install the lever assembly onto the back post handle by installing the two screws (A) through the upper (B) and lower (C) lever pieces using a Phillips head screwdriver.

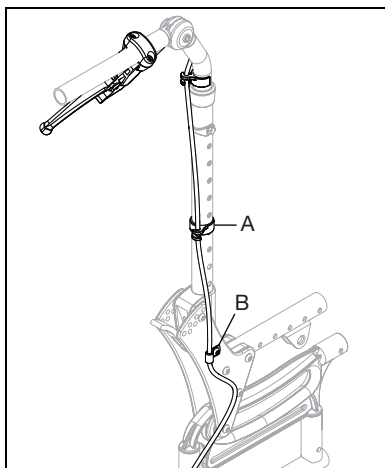
**NOTE: See the table below for cable lengths in different configurations.**

10. Begin cable routing by attaching a cable clip (D) on the back post as shown.

Drum Brake Cable Lengths			
Backrest	Back Height	Standard Frame	Extended Frame
Height Adjustable, Adjustable Push Handle, Standard	18-22"T	002468 (Short - 44")	002469 (Medium - 48")
	23-25"T	002469 (Medium - 48")	002470 (Long - 52")
Height Adjustable, Adjustable Push Handle, Tall	20-24"T	002469 (Medium - 48")	002470 (Long - 52")
	25-27"T	002470 (Long - 52")	002471 (XL - 56")
Fixed Height Adjustable Push Handle, Short	22"	002468 (Short - 44")	002469 (Medium - 48")
Fixed Height Adjustable Push Handle, Tall	26"	002469 (Medium - 48")	002470 (Long - 52")
Stroller, Short	20"	111546 (Extra Short - 40")	002468 (Short - 44")
Stroller, Tall	24"	002468 (Short - 44")	002469 (Medium - 48")



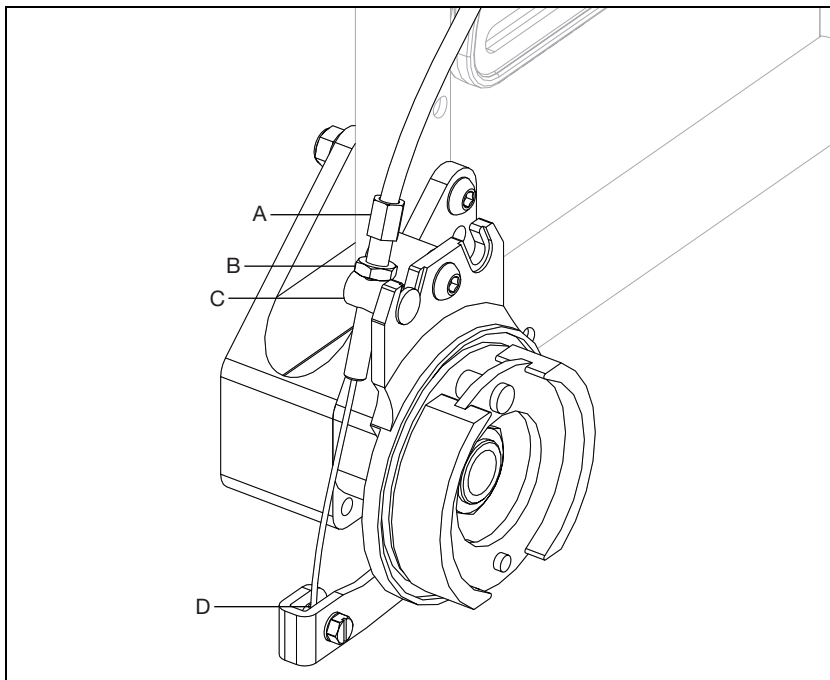
11. Route the cable down the back post using another cable clip and P-Clip as shown below.





## Drum Brake

12. Install the cable to the drum brake with the keyhole barrel connector (C).
13. Attach the cable core to the pinch bolt (D). Remove the slack in the cable and trim cable flush after final adjustment.
14. Adjust the cable by threading the cable adjuster (A) in the barrel connector. Test the drum brake function with no one in the chair. Adjust more if needed, otherwise lock in place by tightening the jam nut (B).



# Handrim Configurations

**NOTE: Not all wheels listed below are available for specific models. See an order form or the online parts manual for more information on your specific chair model.**

Handrim Hardware Chart																
Wheel		Handrim Connection					Handrim									
Wheel	Wheel Part No.	Connection Points	Rivet/Tab	Spacer*	Screw*	Aluminum Anodized	Superlight	Plastic Coated	Projection	Ergonomic Standard	Ergonomic LT	Natural Fit Standard	Natural Fit LT	Flex Rim		
22" Spoke	16730	5 or 6	16732 (Used with 5 Rivet) 100698 (Used with 6 Rivet)	100653 (Not used w/ Superlight Handrim)	Aluminum, Plastic Cld. Projection Ergonomic: 100654 Natural Fit: 100835 Superlight: Screw: 100669 Nut: 100657	10898 (5 Rivet)		10964 (5 Rivet)	12824 (6 Rivet)	13082 (6 Rivet)	13085 (6 Rivet)	200538 (6 Rivet)	200201 (6 Rivet)			
24" Spoke	16728	5 or 6	Not used w/ Superlight Handrims			100975 (5 Rivet)	10161 (6 Tab)	100976 (5 Rivet)	12825 (6 Rivet)	13083 (6 Rivet)	13086 (6 Rivet)	100793 (6 Rivet)	200202 (6 Rivet)			
18" MAXX Spoke	109285	3				100206										
20" MAXX Spoke	108244	6	100698 (Not used w/ Superlight Handrim)	100653 (Not used w/ Superlight Handrim)	Aluminum, Plastic Cld. Projection, Ergonomic: 100654 Natural Fit: 100835 Superlight: Screw: 100669 Nut: 100657	200536		12828								
22" MAXX Spoke	10505					100560		12820	12824	13082	13085	200538	200201			
24" MAXX Spoke	10506					200349	10161	12821	12825	13083	13086	100793	200202			
25" MAXX Spoke	107436					200350		12822	200548	13084	13087	200539	200540			
26" MAXX Spoke	107437					200351		12823	200549			10907	10454			
20" MAXX Mag	11853	6		Aluminum, Plastic Coated, Projection: 100629	Aluminum, Plastic Coated, Projection, Ergonomic: 103545 Natural Fit & Ergonomic: 10756	200536		12828								
22" MAXX Mag	11854					100560		12820	12824	13082	13085	200538	200201			
24" MAXX Mag	11855					10507	12821	12825	13083	13086	100793	200202				
24" Superlight	10169	6			Screw: 100536 Nut: 100657	100754	10161	100836		13080	13081	100830	100828			
25" Superlight	10160						10160	10161				10464	10460			
20" Spinery Spox						10325		10379								
22" Spinery Spox	See Spinery Spox Page					100827		100808					100889	100888		
24" Spinery Spox						100766	10161	10065					100830	100828		
25" Spinery Spox						100767	10160	100765					10464	10460		
26" Spinery Spox		10477		10148					200200	100950						
22" Spinery LX	See Spinery LX Page	100827		100808					100889	100888						
24" Spinery LX		100766	10161	10065				13080	13081	100830	100828					
25" Spinery LX		100767	10160	100765					10464	10460						
26" Spinery LX		10477		10148					200200	100950						

\* Spacer and screw part numbers listed in the chart are for standard handrim mounting. If using close mount handrim mounting on aluminum anodized, plastic coated or projection handrims, use part number

100792 for the spacer, part number 10266 for the screw on Ki Spoke and MAXX Spoke wheels, part number 100666 for the screw on 5-Spoke X Core wheels, or part number 100654 for the screw on MAXX Mag wheels.

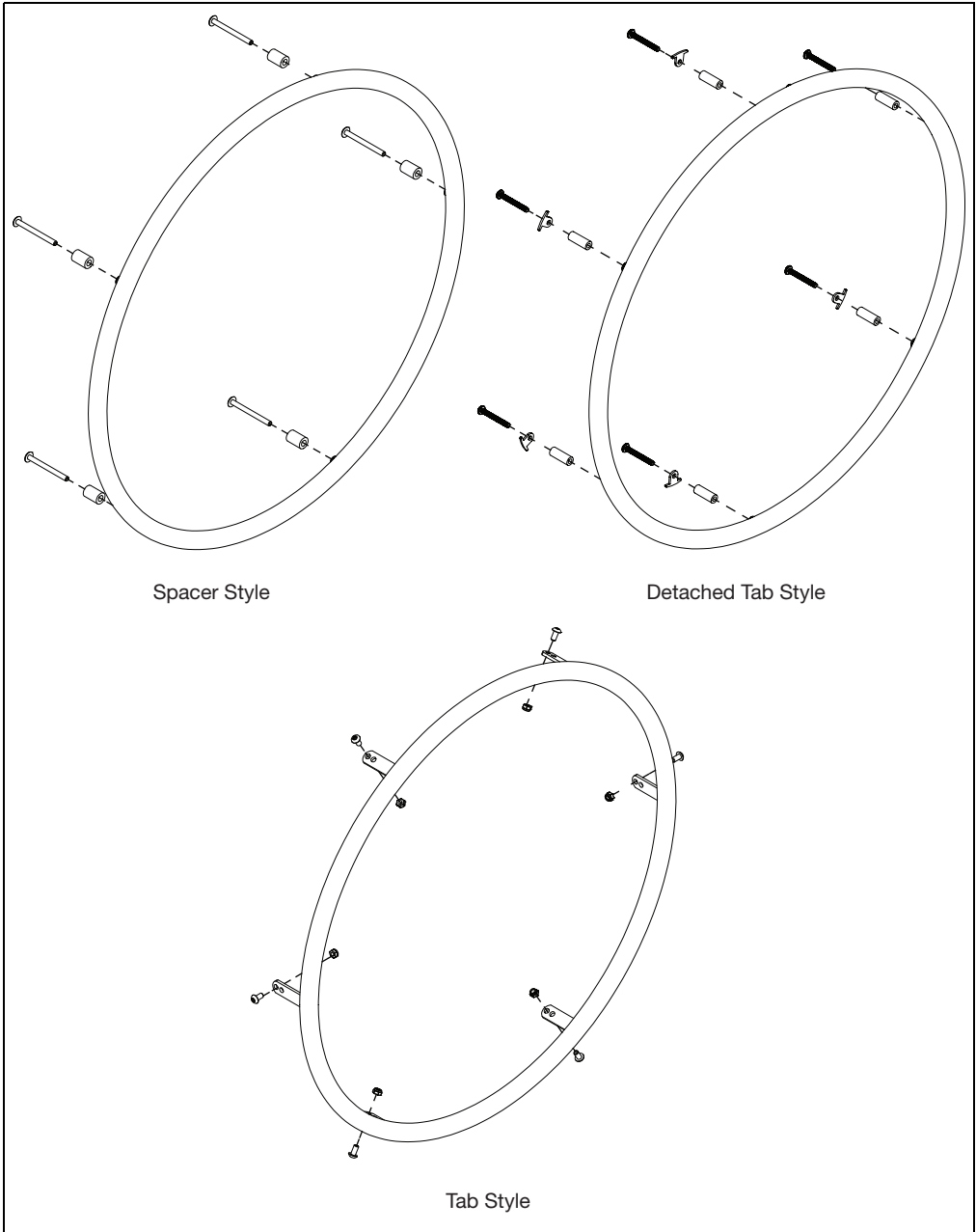
Handrim Hardware Chart (Discontinued Wheels)														
Wheel		Handrim Connection					Handrim							
Wheel	Wheel Part No.	Connection Points	Rivet/Tab	Spacer*	Screw*	Aluminum Anodized	Superlight	Plastic Coated	Projection	Natural Fit Standard	Natural Fit LT	Flex Rim		
18" Ki Spoke	200529	3				100206		10106						
20" Ki Spoke	200530	6	100698	100653	Aluminum, Plastic Cld. Projection: 100654 Natural Fit: 100835	200536		200542						
22" Ki Spoke	200531					100560	100576	100569	200538	200201				
24" Ki Spoke	200532					200349	100577	200547	100793	200202				
25" Ki Spoke	200533					200350	10070	200548	200539	200540				
26" Ki Spoke	200534					200351	100578	200549	100907	10454				
20" 5-Spoke X Core	10961	5		Aluminum, Projection, Natural Fit: 100629	100724	10897		10963						
22" 5-Spoke X Core	10962					10898		10964						
24" 5-Spoke X Core	10960					100975		100976	200546					
24" 5-Spoke X Core	100960							Plastic Cld: 10756	10893				100768	100769

\* Spacer and screw part numbers listed in the chart are for standard handrim mounting. If using close mount handrim mounting on aluminum anodized, plastic coated or projection handrims, use part number

100792 for the spacer, part number 10266 for the screw on Ki Spoke and MAXX Spoke wheels, part number 100666 for the screw on 5-Spoke X Core wheels, or part number 100654 for the screw on MAXX Mag wheels.

# 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.

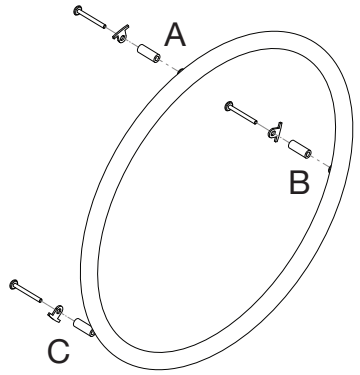


# Handrim Tightening

The correct tightening patterns are shown below.

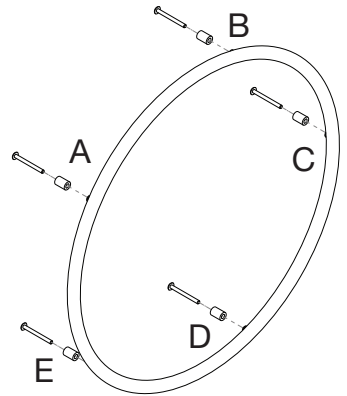
## 3-Hole Pattern

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



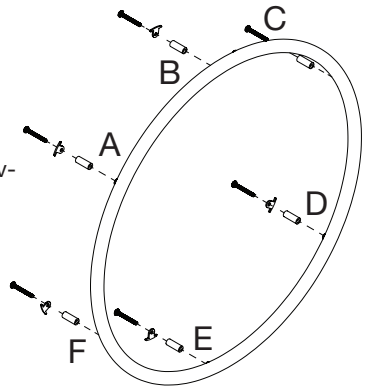
## 5-Hole Pattern

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

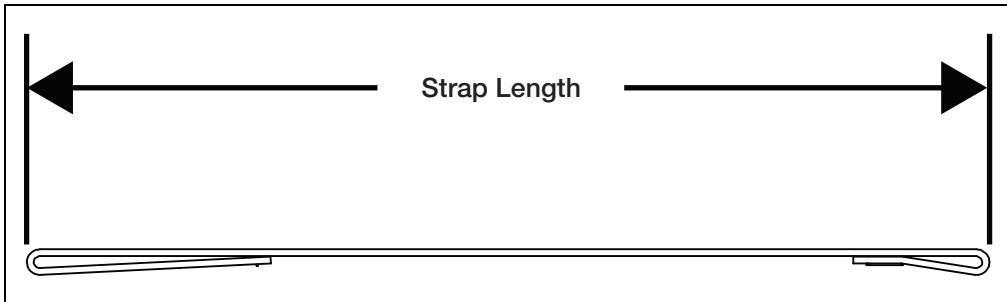


## 6-Hole Pattern

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

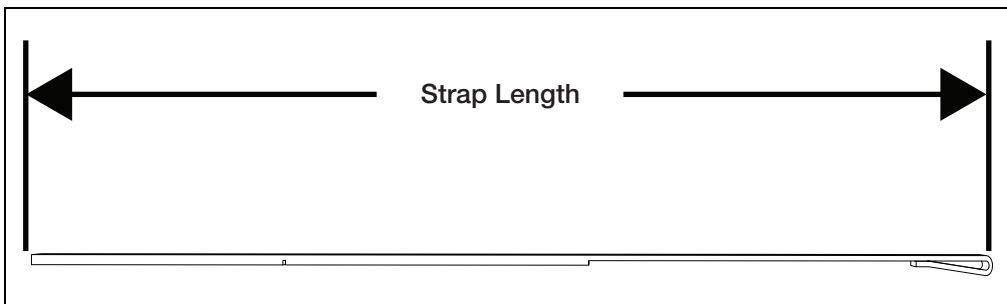


# Footplate and Heel Loops



Heel Loop (See Image Above)

Size	Part Number	Standard Hanger			Offset Hanger			Strap Length
		Angle Adjustable	Composite	Composite Angle Adjustable	Angle Adjustable	Composite	Composite Angle Adjustable	
Short	100591	N/A	14" - 15"	N/A	N/A	N/A	N/A	9.4"
Medium	100592	14" - 15"	16" - 17"	15" - 16"	N/A	14" - 15"	15" - 16"	10.4"
Long	100593	16" - 22"	18" - 22"	17" - 22"	16" - 22"	16" - 22"	17" - 22"	11.4"

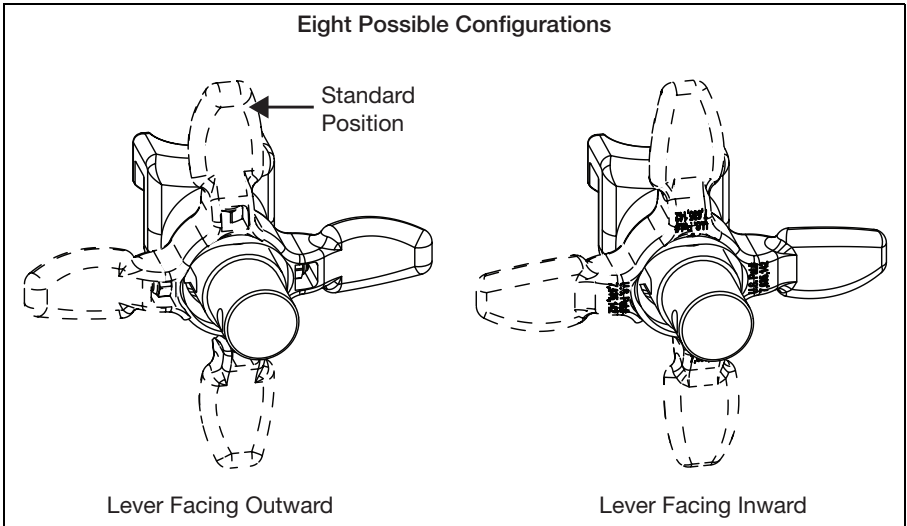


Adjustable Heel Loop (See Image Above)

Size	Part Number	Standard Hanger			Offset Hanger			Strap Length
		Angle Adjustable	Composite	Composite Angle Adjustable	Angle Adjustable	Composite	Composite Angle Adjustable	
Extra Small	112009	10" - 13"	N/A	N/A	N/A	N/A	N/A	17"
Short	103364	14" - 17"	14" - 18"	14" - 17"	N/A	14" - 16"	N/A	19"
Medium	103365	18" - 20"	19" - 22"	18" - 20"	16" - 18"	17" - 22"	16" - 18"	21"
Long	103366	21" - 22"	N/A	21" - 22"	19" - 22"	N/A	19" - 22"	25"

# Rotating 4-Way Latch

The 4-Way latch has eight possible configurations, four with the curve of the lever facing outward and four with the curve of the lever facing inward. See diagram below.

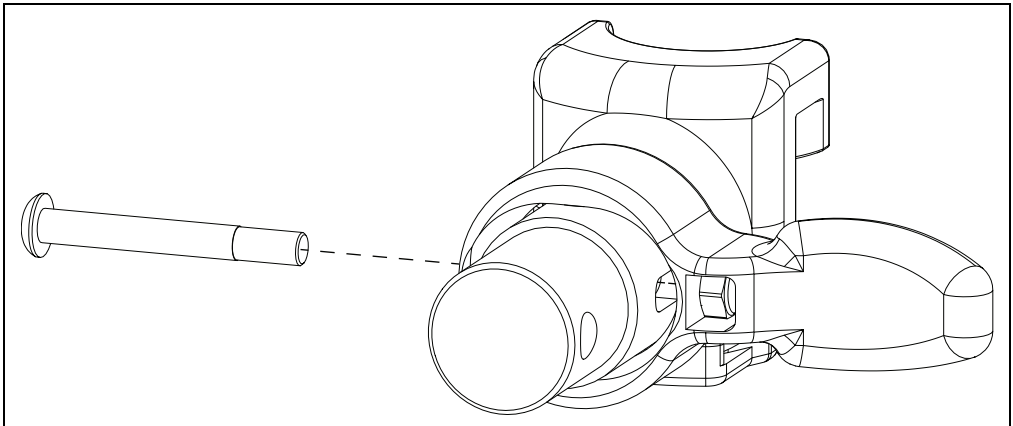


## Rotating

1. To rotate the 4-Way Latch, remove the screw using a 3mm Allen wrench while the hanger is still on the chair (spring must be engaged to remove and reinsert screw and keeping the hanger on the chair keeps the spring engaged). Ensure the nut does not fall out.
2. Rotate the 4-Way Latch to desired orientation and reinsert screw with 3mm Allen wrench. Ensure that the nut stays in position while tightening the screw. Do not overtighten screw or mechanism will bind.

**NOTE: To reverse the 4-way latch, the same screw is removed, but the hanger has to be removed from the latch block. Once removed, slide the latch off, flip over and reinstall. Ensure spring is engaged, by pushing and holding the latch button in, and nut stays in position while reinstalling the screw.**

**NOTE: In-line position is not achievable with the Pro ELR Footrest option.**

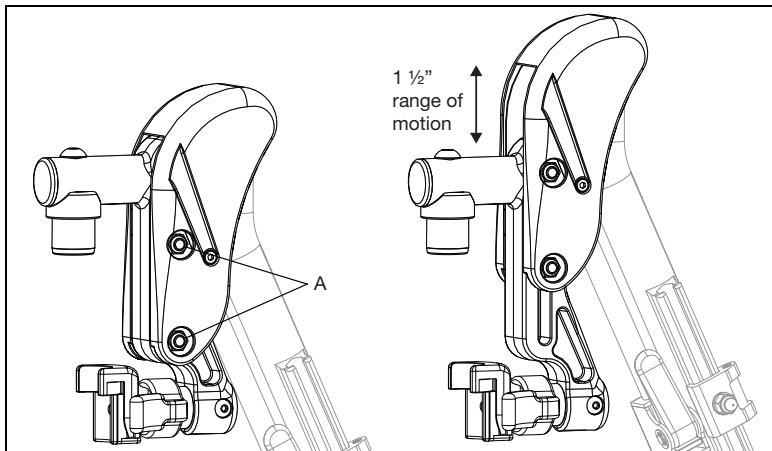


# Pro ELR Adjustment

**NOTE:** Instructions for adjusting the height of the calf pad, the depth of the calf pad and the length of the footrest can be found in the owner manual in the Pro Elevated Leg Rest section.

## Adjusting Knee Height

1. Using two 10mm socket wrenches, loosen the two nuts (A) on the cover.
2. Adjust knee height to desired setting.
3. Retighten the two nuts (A) after desired height is attained.



## Adjusting Height Adjustable T-Arm Position

**NOTE:** The image below also shows how the arm pad is connected for a reference. The arm pad does not need to be adjusted if the armrest position is being changed.

1. Remove two screws, two washers and two nuts from armrest receiver using a 4mm Allen wrench and a 10mm wrench.

**NOTE:** Spacers (B) are only used when the receiver mount screw lands on the growth tube.

2. Move receiver to desired location on seat frame and reinstall screws, washers and nuts.

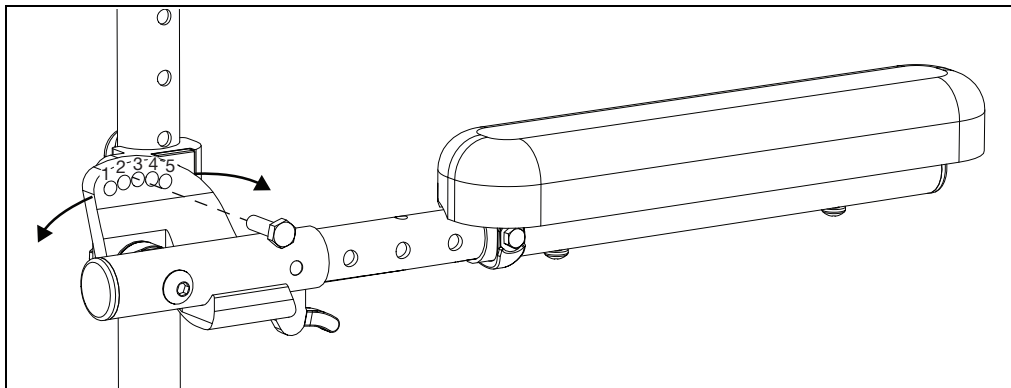
**NOTE:** The bolt (A) size varies depending on configuration. See the table in the image below for correct bolt usage.

Seat Rail Hole Positions

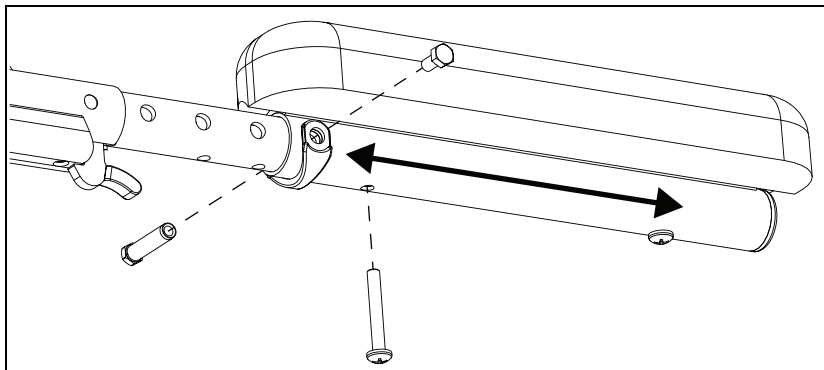
Hole Position	Seat Frame Size	
	Extra Short	Short, Medium, Long
1	101592 (M6x1x45)	101592 (M6x1x45)
2	110286 (M6x1x70)	101592 (M6x1x45)
3	100662 (M6x1x25)	100662 (M6x1x25)
4	100662 (M6x1x25)	100662 (M6x1x25)
5	100662 (M6x1x25)	100662 (M6x1x25)
6	101592 (M6x1x45)	110286 (M6x1x70)
7+	101592 (M6x1x45)	101592 (M6x1x45)

# Pediatric Angle Adj. Locking Flip Up Extendable Armrest

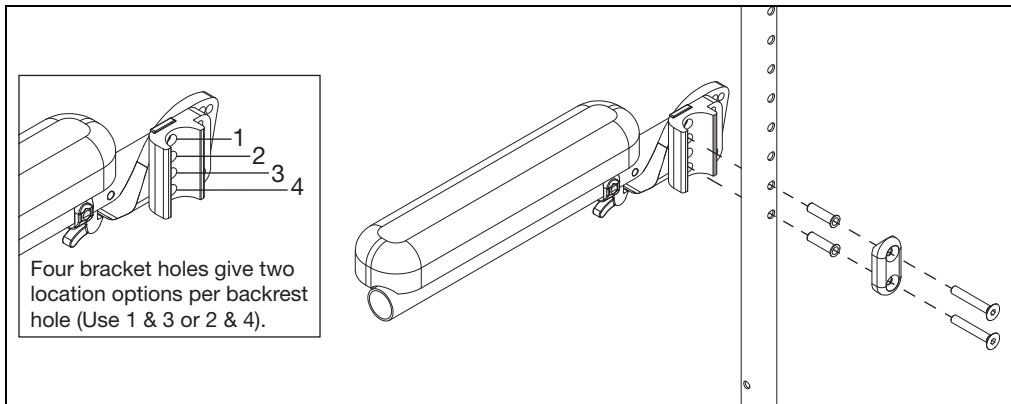
1. Set the angle of the armrest. There are five holes that can be used to set the angle. Tighten the bolt once angle is set.



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.

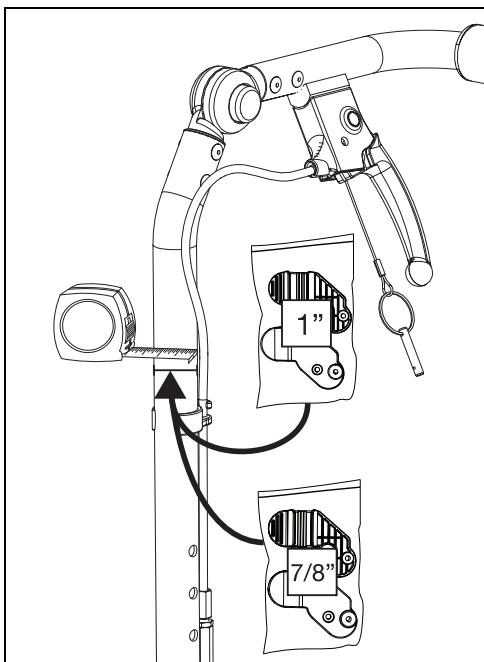




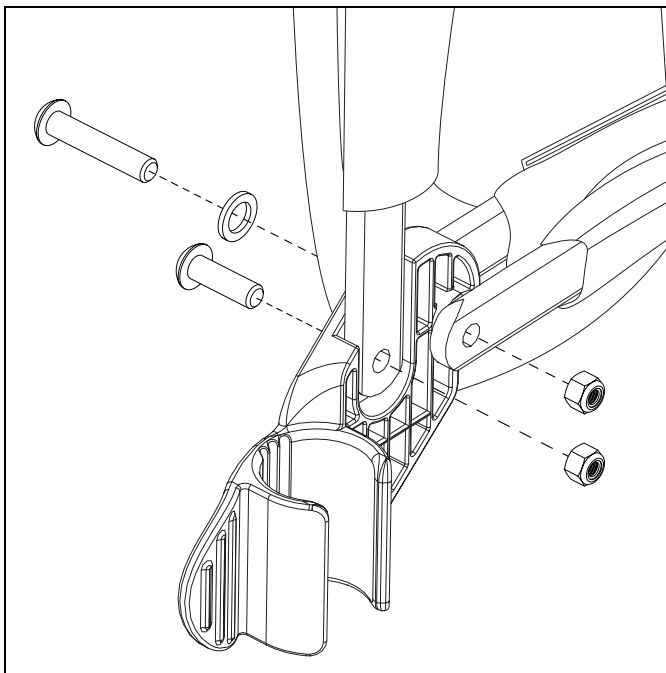
# Canopy

## Installation

1. Determine the size of backrest on the chair. Clamps have been provided for 7/8" and 1" backrest canes.

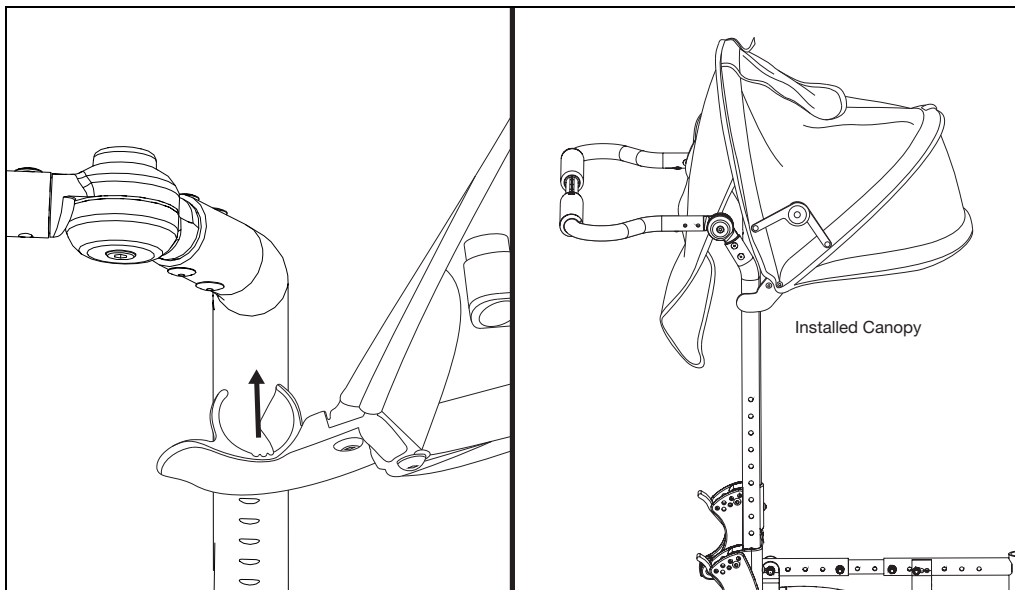


2. Install the clamps to the canopy, as shown below, with two screws, one washer and two nuts per side using a 3mm Allen wrench and a 4mm wrench. Repeat on opposite side.



# Canopy

3. Push the clamps on the canopy assembly onto the back canes. To remove, the clamps can be pulled off.

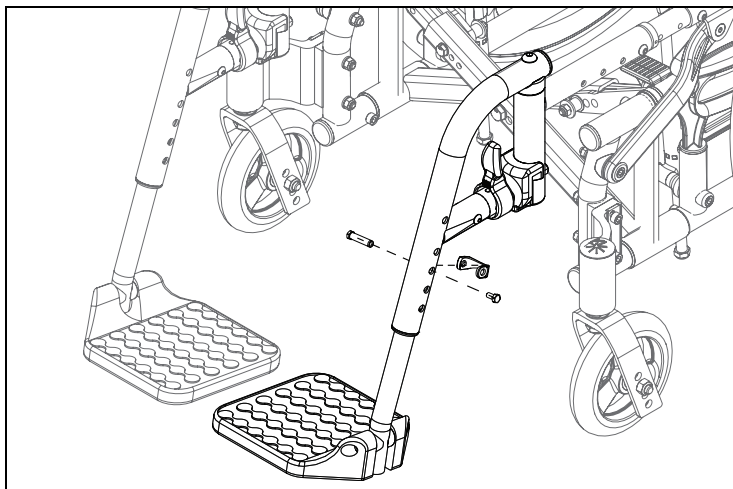


## Footrest Length Adjustment

1. Remove the bolt (D) and threaded insert (B) from the footrest with a 8m wrench.
2. Slide the adjustment collar (C) to the desired hole and move the extension to the desired length.

**NOTE: The adjustment collar doesn't need to come all the way off, it is shown off to clearly show the part being called out.**

3. Reinstall the bolt and threaded insert through the adjustment collar and footrest tubes to secure.
4. Repeat steps 1 - 3 on opposite side.
5. 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.

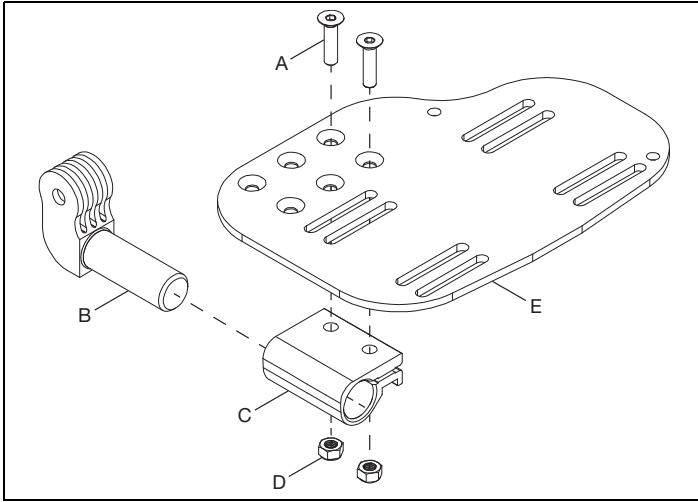


# Contracture Footrest

## Installation

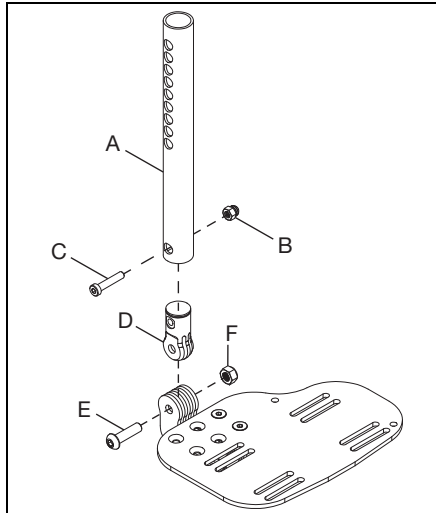
1. Install foot pivot (B) into footplate clamp (C). Install footplate (E) onto footplate clamp (C) with two screws (A) and two nuts (D) using a 5mm Allen wrench and a 10mm wrench.

**NOTE:** There are three sets of holes that the footplate can be mounted with. The holes allow for the footplate to be mounted further forward or further backward, depending on the configuration desired by the user.



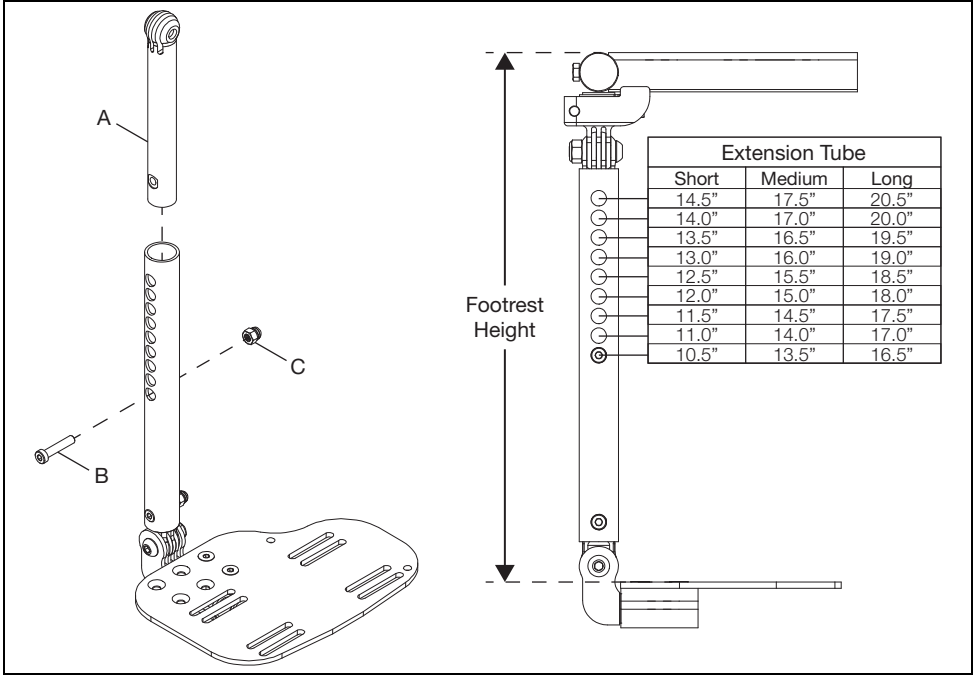
2. Install short pivot (D) into footplate assembly with a screw (E) and nut (F) using a 5mm Allen wrench and a 13mm wrench. Install extension tube (A) onto short pivot (D) using a screw (C) and nut (B) using a 5mm Allen wrench and a 10mm wrench.

**NOTE:** Tighten the pivot joint screw (E) to 240 in/lbs.



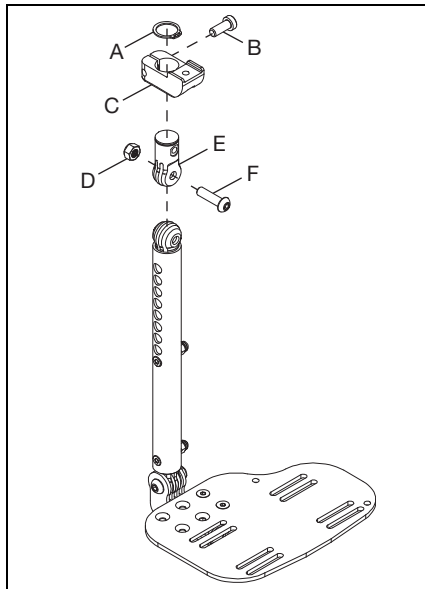
# Contracture Footrest

3. Install long pivot (A) into extension tube. Use the chart below to determine the holes you will be using for the desired footrest height and secure in position by installing screw (B) and nut (C) using a 5mm Allen wrench and a 10mm wrench.



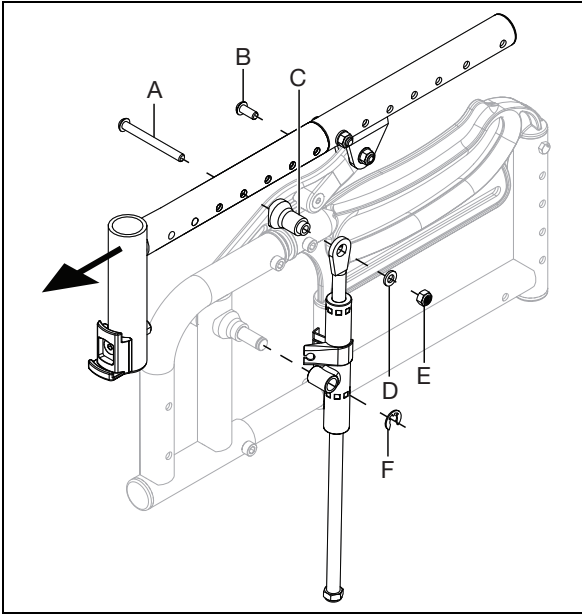
4. Install short pivot (E) into the long pivot and secure with screw (F) and nut (D) using a 5mm Allen wrench and a 13mm wrench. Install the slide mount (C) onto the short pivot (E) and secure by installing screw (B) with a 5mm Allen wrench and installing the retaining ring (A).

**NOTE: Tighten the pivot joint screw (F) to 240 in/lbs.**

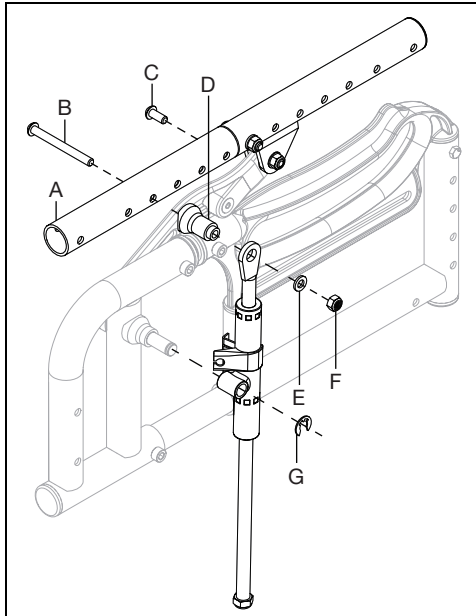


# Contracture Footrest

5. Remove any seating system, cushion, seat pan and/or hangers from the chair.
6. Remove the front seat tube from the seat frame by removing two screws (A & B), mechlock mount (C), washer (D), E-Clip (F) and nut (E) with a 4mm Allen wrench and a 10mm wrench. Save all parts and repeat on opposite side.

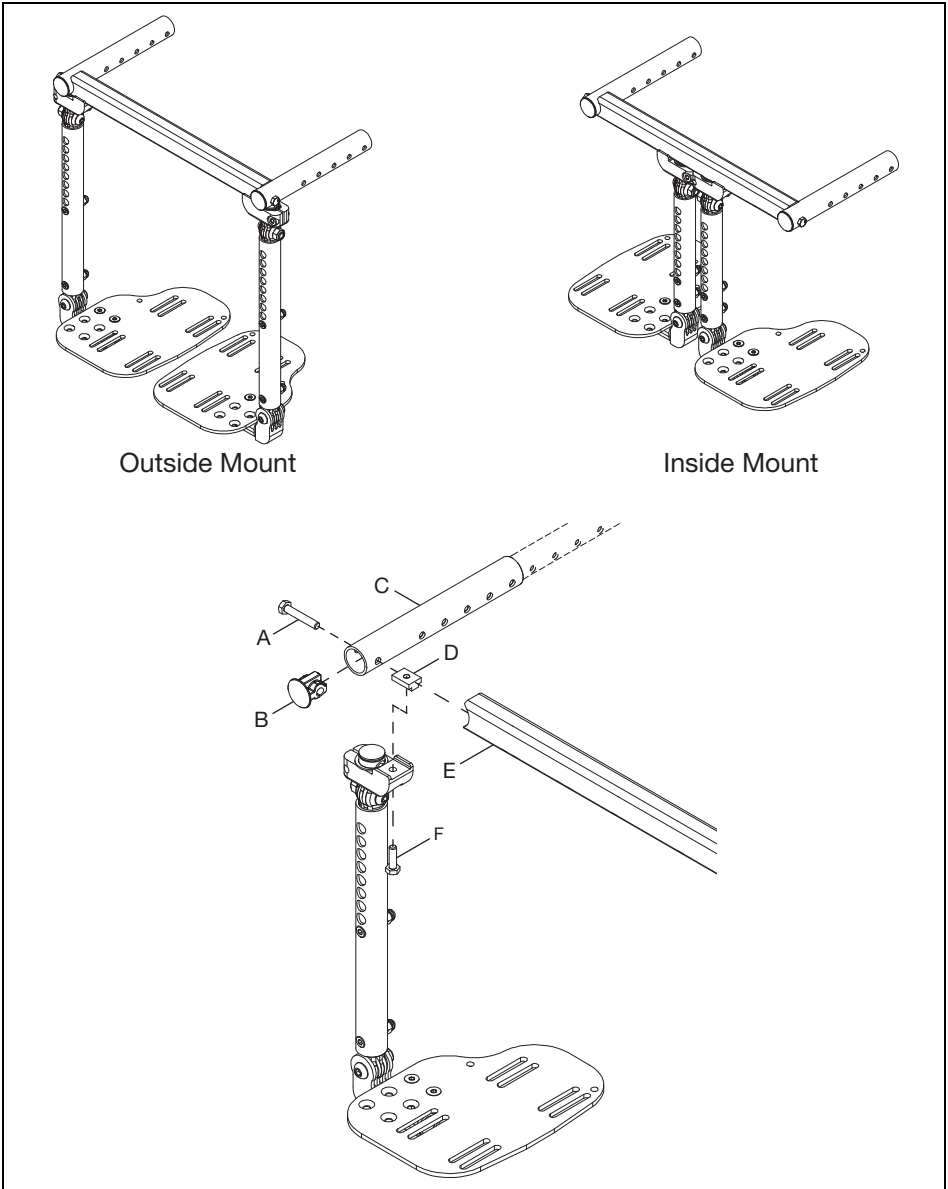


7. Install the new contracture front seat tube (A) with two screws (B & C), mechlock mount (D), washer (E), E-Clip (G) and nut (F) with a 4mm Allen wrench and a 10mm wrench. Repeat on opposite side.



# Contracture Footrest

8. Determine whether the contracture footrest is going to be set up in the outside mount or inside mount position. Install footrest assembly, outside or inside mounted, by sliding the contracture seat tube (C) onto the frame. Assemble footrest to contracture seat tube by installing T-Nut (D) along channel on the inside of the mount rail (E). Secure pieces in place by installing screw (A) through seat tube into the mount rail using a 10mm wrench and a screw (F) through the sliding mount into the bottom of the T-Nut using a 10mm wrench. Last, install end cap (B) into seat tube. Repeat on opposite side.



9. Reinstall strut tube, in the same position as before, and any seating system, seat pan or cushion that may have been removed before the installation process.

**NOTE: See Step 6 for strut tube hardware and tools if needed.**

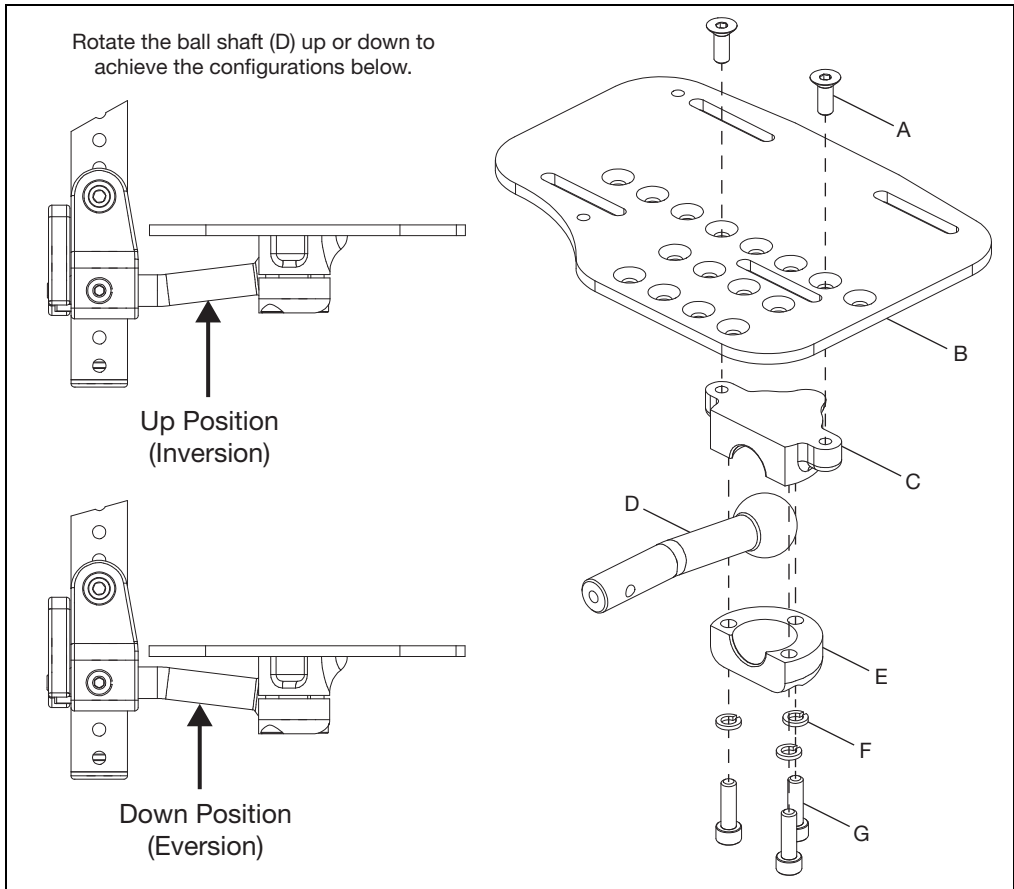
# Multi-Angle Footrest

## Installation

1. Determine which configuration the ball shaft (D) will need to be in - down (eversion) or up (inversion). See figure below for example. Install footplate (B) onto upper footrest clamp (C) with two screws (A) using a 4mm Allen wrench. Install ball shaft (D) into lower footrest clamp (E) and secure to the upper footrest clamp using three screws (G) and three lock washers (F) using a 5mm Allen wrench.

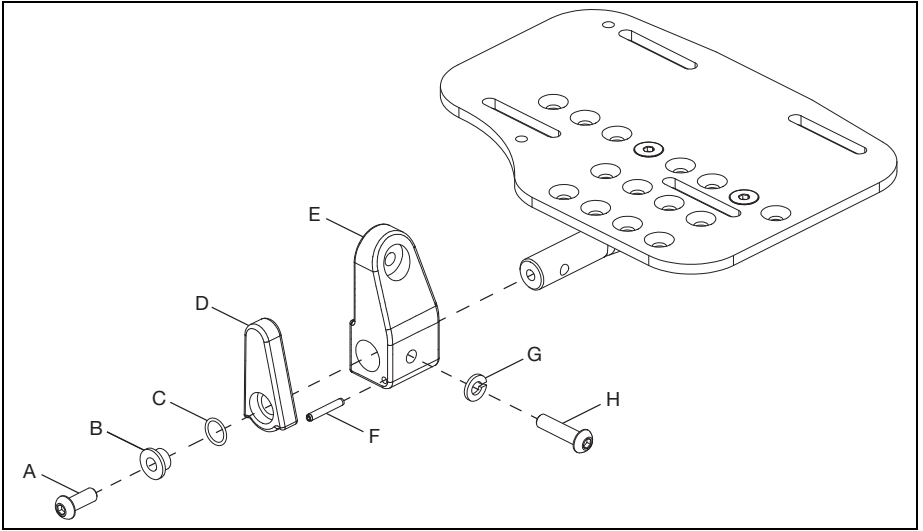
**NOTE: Install the footplate to the upper footrest clamp using the set of holes needed for the desired configuration. The holes allow the footplate to be moved further inward or outward depending on preference.**

**NOTE: Torque the three screws (G) to 144 in/lbs.**



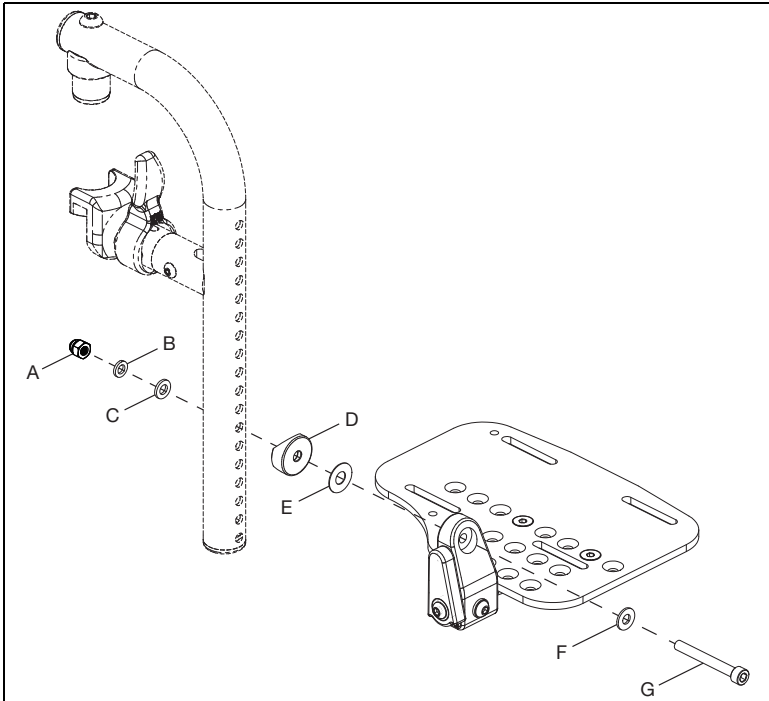
# Multi-Angle Footrest

2. Install footrest mount (E) onto the end of the ball shaft and secure with screw (H) and lock washer (G) using a 4mm Allen wrench. Install the flip-up latch (D) onto the footrest mount and secure with latch spring (C), bushing (B) and screw (A) using a 4mm Allen wrench. Push spring pin (F) into the footrest mount to limit the movement of the flip-up latch.



3. Install footplate assembly to hanger with screw (G), washer (Fig. 3:F), washer (E), saddle spacer (D), washer (C), washer (B) and nut (A) using a 5mm Allen wrench and a 10mm wrench.

**NOTE: Install footplate assembly to hanger using the correct holes for the desired footrest height.**

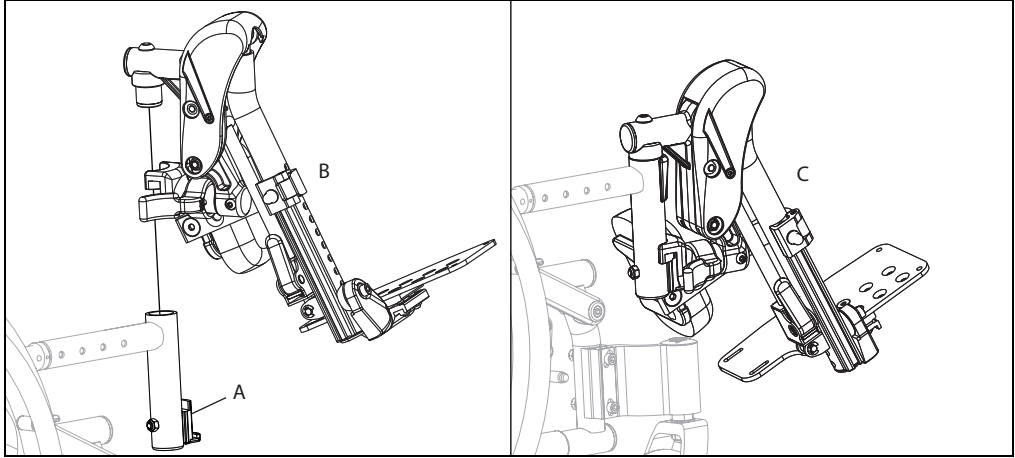




# Pediatric Pro ELR

## Installing Pediatric Pro Elevated Leg Rest Assembly

1. Remove current hangers from chair if applicable. Install latch blocks (A) if not present.
2. Install the Pediatric Pro ELR the same way as a swing away hanger. Place the swing away pivot saddle into the receiver on the front frame tube with the leg rest facing either inward or outward from the frame (B).
3. Rotate the leg rest so that it aligns with the frame until it locks into place in the latch block (C).

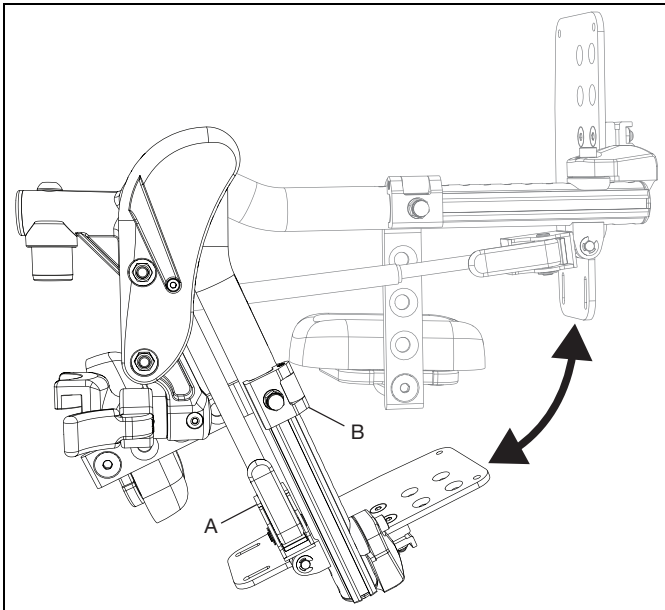


## Use

1. To raise the Pediatric Pro ELR, lift the leg rest tube (B) to desired angle of elevation.
2. To lower the Pediatric Pro ELR, press and hold the lever lock (A) while pushing the leg rest tube (A) down.

**NOTE: Support or remove weight from the Pediatric Pro ELR while lowering to avoid a sudden drop when the lever lock is pushed.**

**NOTE: The calf pad can swing outward to clear the front of the chair for transfers.**



# Pediatric Pro ELR

## Removal (Refer to first image in Pediatric Pro ELR Section)

1. To remove leg rest, push or pull release latch.
2. Lift the leg rest straight upward to remove. You may also swing the leg rest inward or outward before lifting it off.

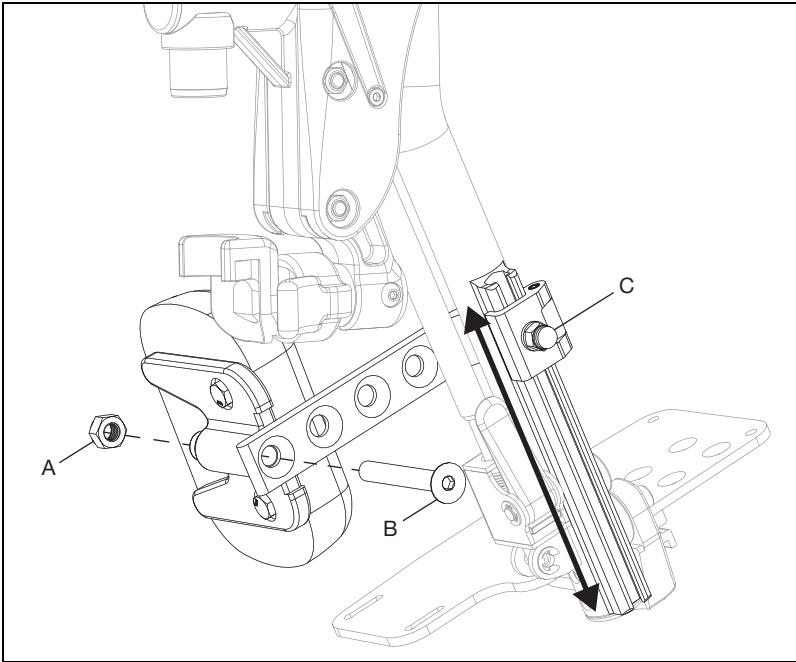
## Adjusting Calf Pad

### Adjusting Height of Calf Pad

1. Loosen nut (C) using a 10mm wrench.
2. Slide calf pad arm up or down to desired location. Retighten nut.

### Adjusting Depth of Calf Pad

1. Remove screw (B) and nut (A) on calf pad arm using a 5mm Allen wrench and a 13mm wrench.
2. Pick the desired location based on the four predrilled holes and reinstall screw and nut.

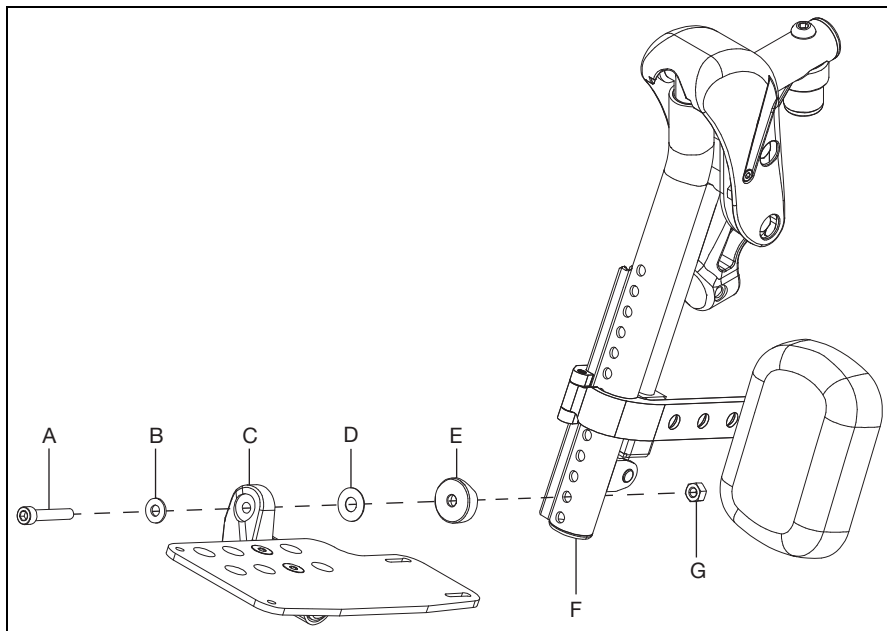


# Pediatric Pro ELR

## Adjusting Length of Footrest

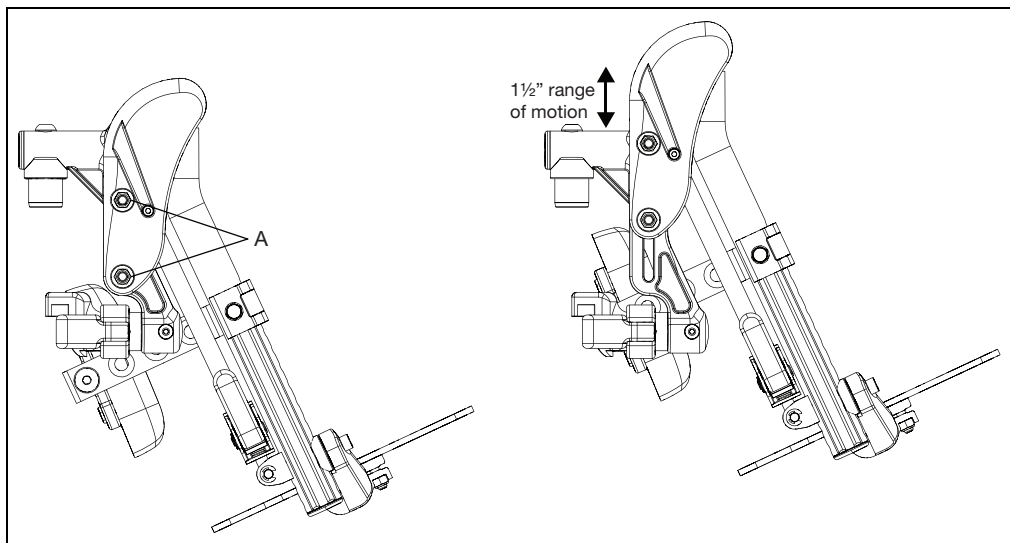
1. Remove bolt (A), washer (B), footplate assembly (C), washer (D), saddle (E), nut (G) and ensure footrest tube insert (F) stays in tube using a 5mm Allen wrench and a 10mm wrench.
2. Move footplate to desired height and reinstall hardware to secure in the hole closest to desired height.

**NOTE: Move the calf pad as needed when adjusting the length of the footrest.**



## Adjusting Knee Height

1. Using two 10mm socket wrenches, loosen the two nuts (A) on the cover.
2. Adjust knee height to desired setting.
3. Retighten the two nuts (A) after desired height is attained.

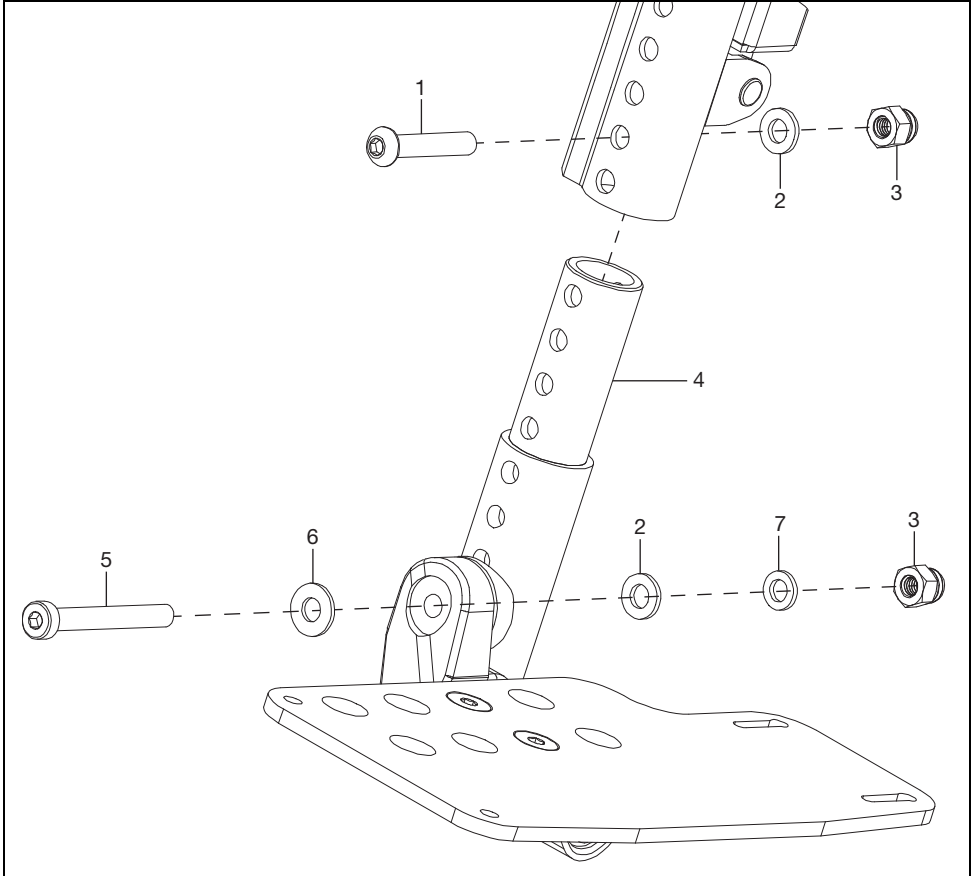


# Pediatric Pro ELR

## Extension Mount Configuration

Some configurations may require an extension mount to avoid interference with the footplate. Use a 5mm Allen wrench, a 4mm Allen wrench and a 10mm wrench to attach your footplate to the extension mount and the extension mount to the hanger assembly. Extension mount hardware is included in a separate bag.

**NOTE: The footrest tube insert is not used when the extension mount is used and the hardware for attaching is different. See figure below for parts diagram (Not all parts are sold individually, refer to parts manual for additional information at [www.kimobility.com](http://www.kimobility.com)) and the part description chart below (the rest of the assembly is shown on the next pages).**



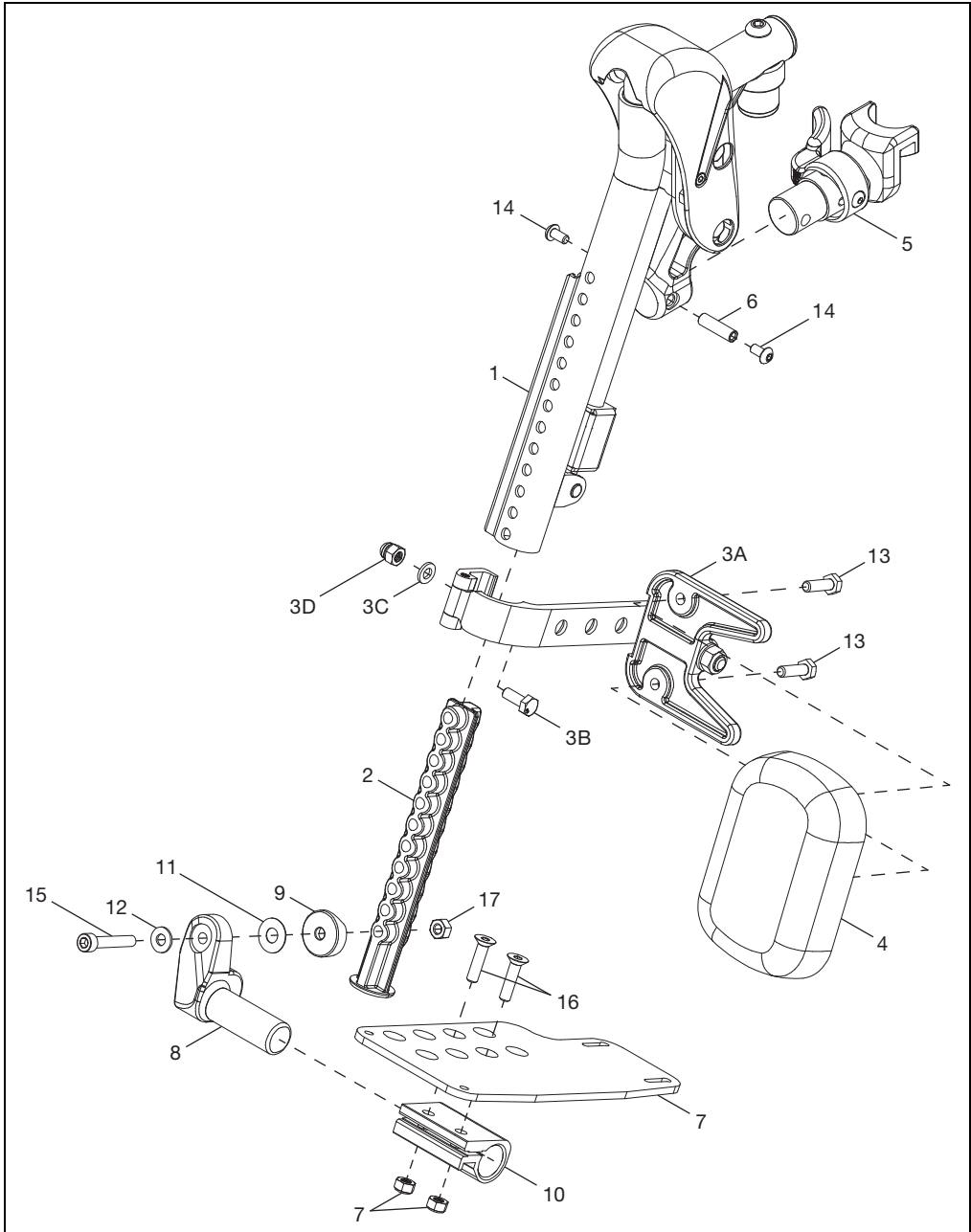
Item Number	Part Number	Description	Quantity
1	101811	BHCS, M6x1.0x35, CL10.9, BLZ, DIN7380	1
2	100746	WASHER, FLAT, M6, BLZ, DIN125A	2
3	100558	NUT, HEX, M6x1.0, DOME, CLS6, BLZ, DIN986	2
4	000164	Hanger Extension - 3"	1
5	101124	SHCS, LOW, M6x1.0x50, CL8.8, BLZ, DIN7984	1
6	101455	M6 BELLEVILLE WASHER	1
7	102072	WASHER NYLON .2341Dx.406ODx.062 THICK	1

# Pediatric Pro ELR

## Replacing Pediatric Pro Elevated Leg Rest Parts

1. See figure below for a parts diagram of the Pediatric Pro ELR (Not all parts are sold individually, refer to parts manual for additional information at [www.kimobility.com](http://www.kimobility.com)).

**NOTE: Parts chart located on next page.**

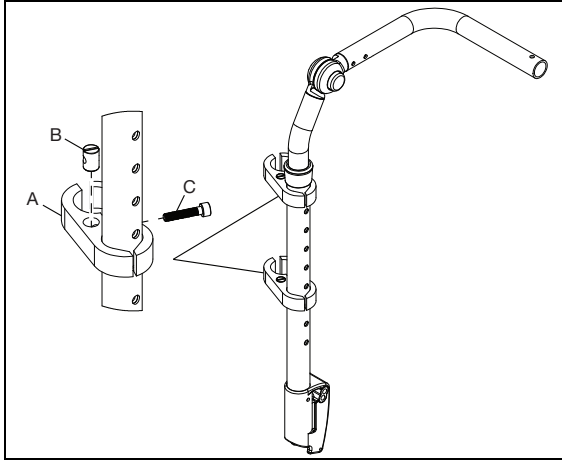


# Pediatric Pro ELR

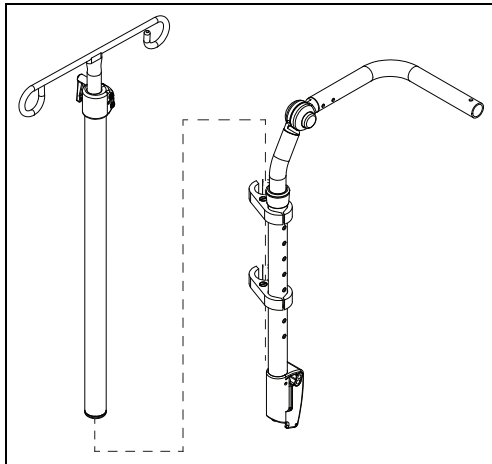
Item Number	Part Number	Description	Quantity
1	003853	Hanger Assy, Pro ELR, FM, R	1
	003854	Hanger Assy, Pro ELR, FM, L	1
2	003843	Insert, Footrest Tube	1
3	003344	Calf Pad Bracket Assembly	1
4	101585	Calf Pad - Large	1
	101470	Calf Pad Pediatric - Medium	1
	003844	Calf Pad, 84mm X 120mm - Small	1
5	003643	Hanger Latch Assy, 4-Way, L	1
	003642	Hanger Latch Assy, 4-Way, R	1
	003416	Hanger Latch Assy, R	1
	003416	Hanger Latch Assy, L	1
6	000073	M5 Threaded Barrel	1
7	001304 - 001307, 000105 - 000110	Footplate, Aluminum Angle Adj, 10-11W - 18-20W, L/R	1
8	000048	Footplate Angle Adj Casting, 1", R	1
	000050	Footplate Angle Adj Casting, 1", L	1
9	003845	Saddle, 1", Rounded	1
10	100502	Angle Adj Footrest Clamp, 2"	1
11	000428	Wear Washer	1
12	101455	M6 Belleville Washer	1
13	101823	HHCS, M6X1.0X20, CLS10.9, NYL, BLZ, DIN933	2
14	100669	BHCS, M5X0.8X10, CLS10.9, BLZ, NYL, ISO7380	2
15	101810	SHCS, M6X1.0X35, CLS12.9, BLZ, DIN912	1
16	100662	FHCS, M6X1.0X25, CLS10.9, BLZ, DIN799 1	2
17	101456	M6 DIN980 CLS8 OVL TOP L/N ZC	1
18	100658	M6 Nylock Nut, BLK ZN	2

# IV Holder

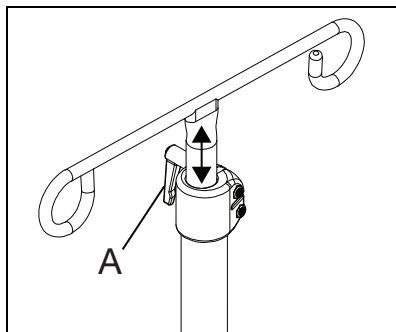
1. Place the two hole clamps (A) with the barrel nut (B) and screw (C) using a 5mm Allen wrench. Ensure the sides of the clamp with the flats are used on the backrest tube. Turn the screw (C) finger tight into the barrel nut (B).



2. From the top, slide the IV pole assembly into the two clamps and tighten the clamp screws to secure pole.

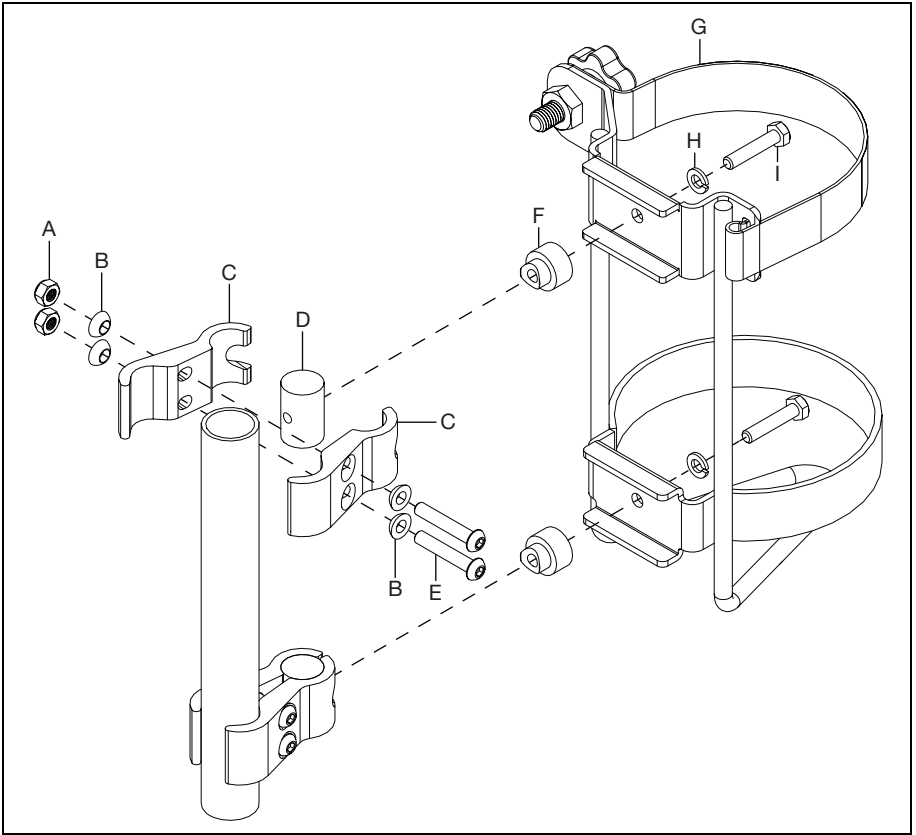


3. Turn the handle (A) to adjust the height of the IV pole.



## O2 Holder

1. Install the clamp mounts (C) and barrel nut (D) to the back post with two screws (E), four spherical washers (B) and two nuts (A) using a 4mm Allen wrench and a 10mm wrench.
2. Install the O2 holder assembly (G) to the barrel nuts (D) with two bolts (I), two lock washers (H) and two spacers (F) using a 10mm wrench.





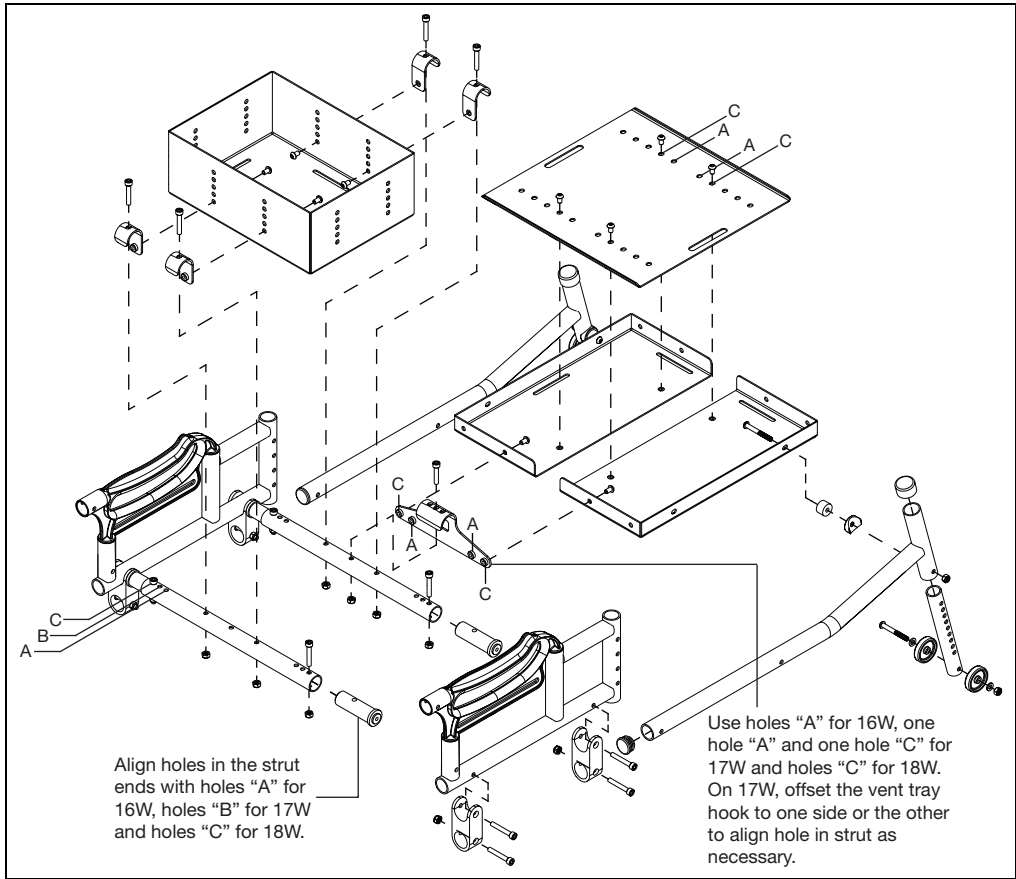
# Vent and Battery Tray

## Vent and Battery Tray

**NOTE:** Vent and battery tray always use the extended rear frame.

**NOTE:** Set the anti-tip wheels to 1.5" to 2" off the ground.

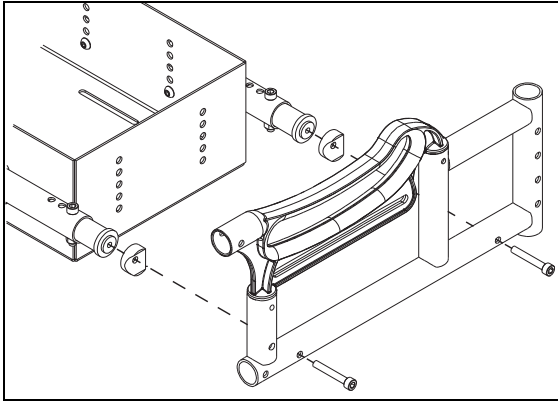
Install the vent and battery tray as shown below. A 5mm Allen wrench and a 10mm wrench are needed.



# Vent and Battery Tray

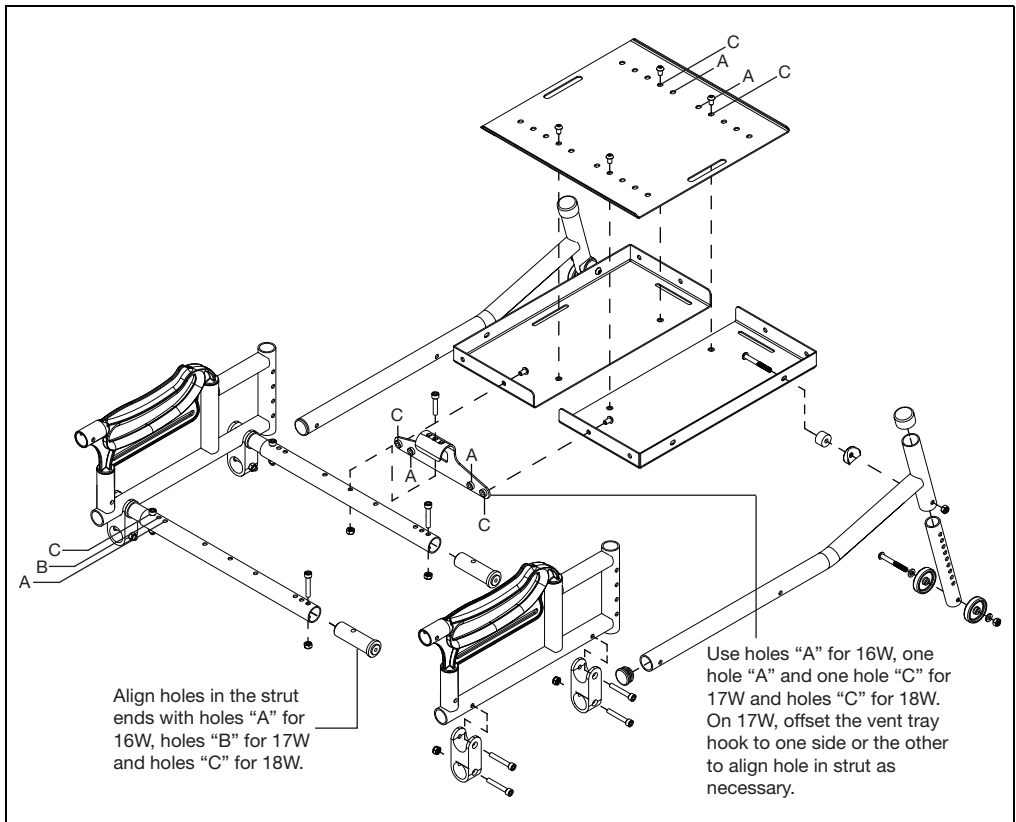
## Battery Tray Only

For battery tray only, the battery tray is installed the same way onto strut tube with the battery tray hooks. The strut tubes are attached to the side frame differently as shown below. A 5mm Allen wrench and a 10mm wrench are needed.



## Vent Tray Only

For vent tray only, the procedure is the same as the vent and battery tray on the previous page, but the battery tray is not installed. A 5mm Allen wrench and a 10mm wrench are needed.



# Rigidizer Handle

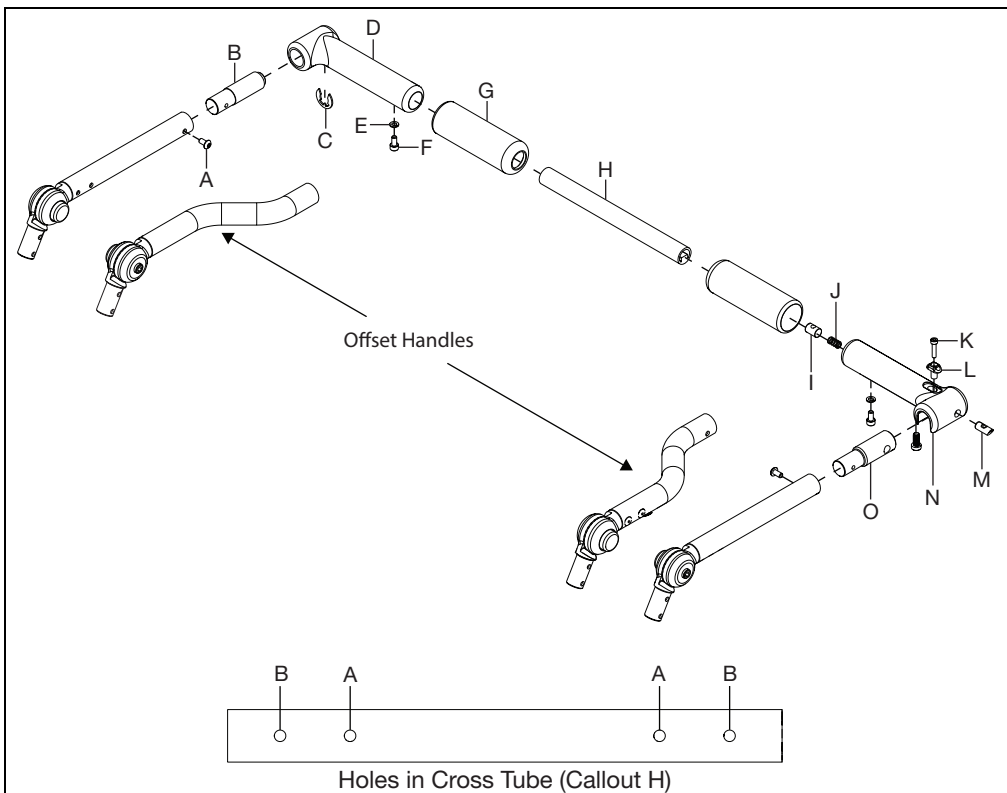
1. Install the spring (J) into the latch (D).
2. Insert the barrel nut (I) into the latch (D) and align the threaded hole in the barrel nut with the hole in the latch.
3. Insert the latch pin (M) through the hole in the latch (N) which will compress the spring (J).
4. Align the hole in the latch pin (M) with the slot in the latch. Fasten pin in place with screw (K) and button latch (L) using a 3mm Allen wrench. Do not overtighten which would cause binding.
5. Insert the pivot adapter (B) into the pivot (D). Secure in place with E-Clip (C).
6. If foam grips (G) are not on, apply isopropyl alcohol to the inside of the foam grips and slide onto the latch and pivot aligning the holes in the grips with the latch and pivot holes.
7. Insert the cross tube (H) into the latch and pivot and secure with screws (E) and lock washers (F) using a 4mm Allen wrench.

**NOTE: See the table below to determine the holes used when installing the cross tube.**

8. Insert the pivot into the right push handle of the backrest and secure with screw (A).
9. Insert the latch adapter into the left push handle of the backrest and secure with screw (A).
10. Verify the function of the latch before use.

**Hole Configuration for Chair Width**

Chair Width	Cross Tube (H)	Hole A + Hole A	Hole A + Hole B	Hole B + Hole B
10 - 12W (offset handles)	110264	10	11	12
12 - 14W (offset handles)	110265	12	13	14
14 - 16W	110264	14	15	16
16 - 18W	110265	16	17	18



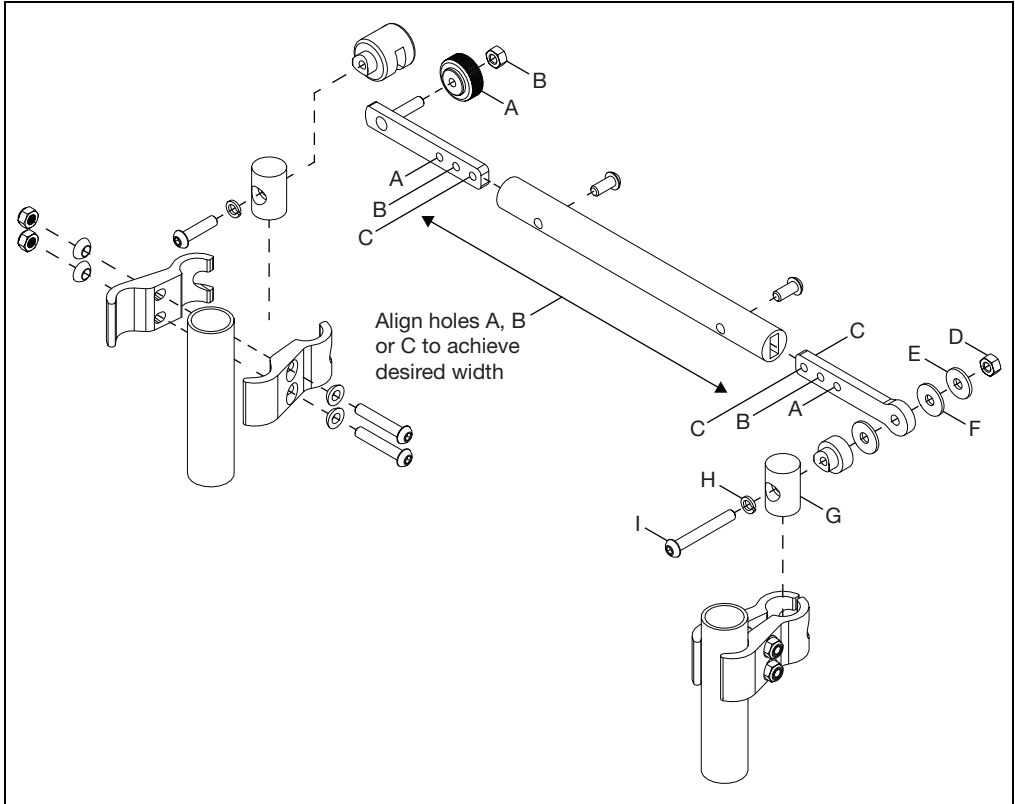
# Rigidizer Bar

Install the rigidizer bar as shown below. A 4mm Allen wrench and a 10mm wrench are needed.

**NOTE:** Thread knob (A) onto the stud of the pivot until it bottoms against the plate. Secure by threading the nut (B) onto the stud until it is flush with the end of the stud.

**NOTE:** Do not overtighten (D). Ensure the pivot (C) moves with light friction.

**NOTE:** Tighten the screw (I) through the lock washer (H) and the barrel (G) before attaching the pivot (C), the flat washer (F), fender washer (E) and the nut (D).



# Hemi Wheel Lock

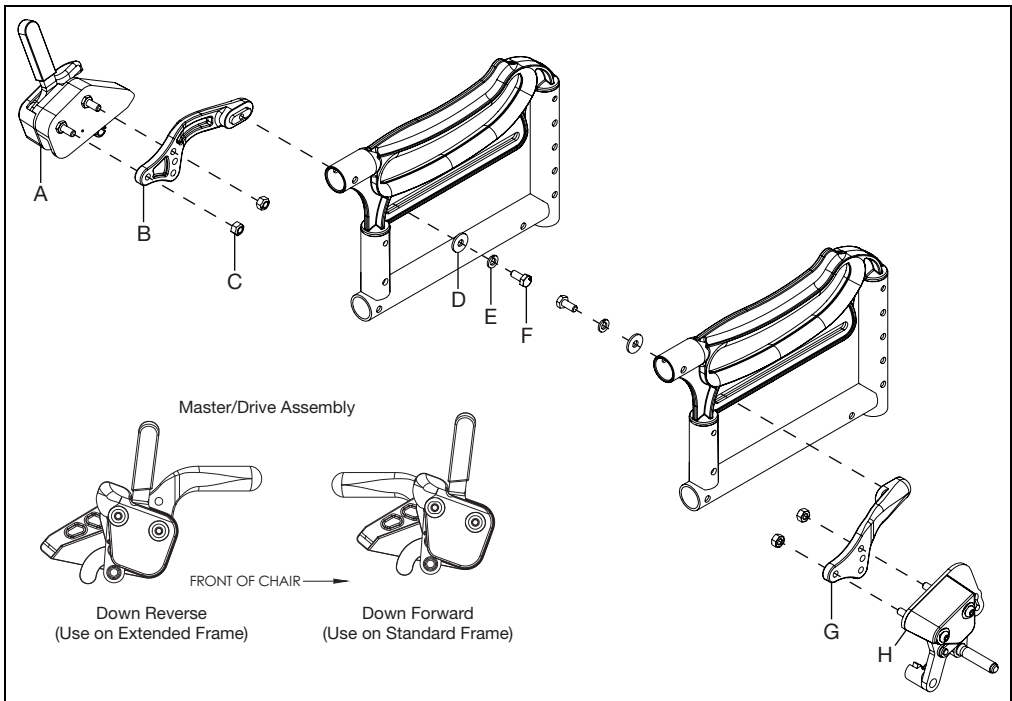
**NOTE:** These instructions show installation of the master/drive side being on the right side. The steps are the same, but flipped if the user wants the master/drive side being on the left side.

1. Install the master assembly (A) onto the right wheel lock mount (B) with two nuts (C) using a 10mm wrench.
2. Install the master assembly and wheel lock mount assembly onto the frame with a bolt (F), lock washer (E) and a flat washer (D) using a 10mm wrench.

**NOTE:** Slide the master assembly and wheel lock mount assembly along the frame so the front most nut (C) is approximately 1/4" from tire. Once in position, secure by tightening to 144 in/lbs.

3. Insert the follower assembly (H) to the left wheel lock mount (G) with two nuts (C) using a 10mm wrench.
4. Install the follower assembly and wheel lock mount assembly onto the frame with a bolt (F), lock washer (E) and a flat washer (D) using a 10mm wrench.

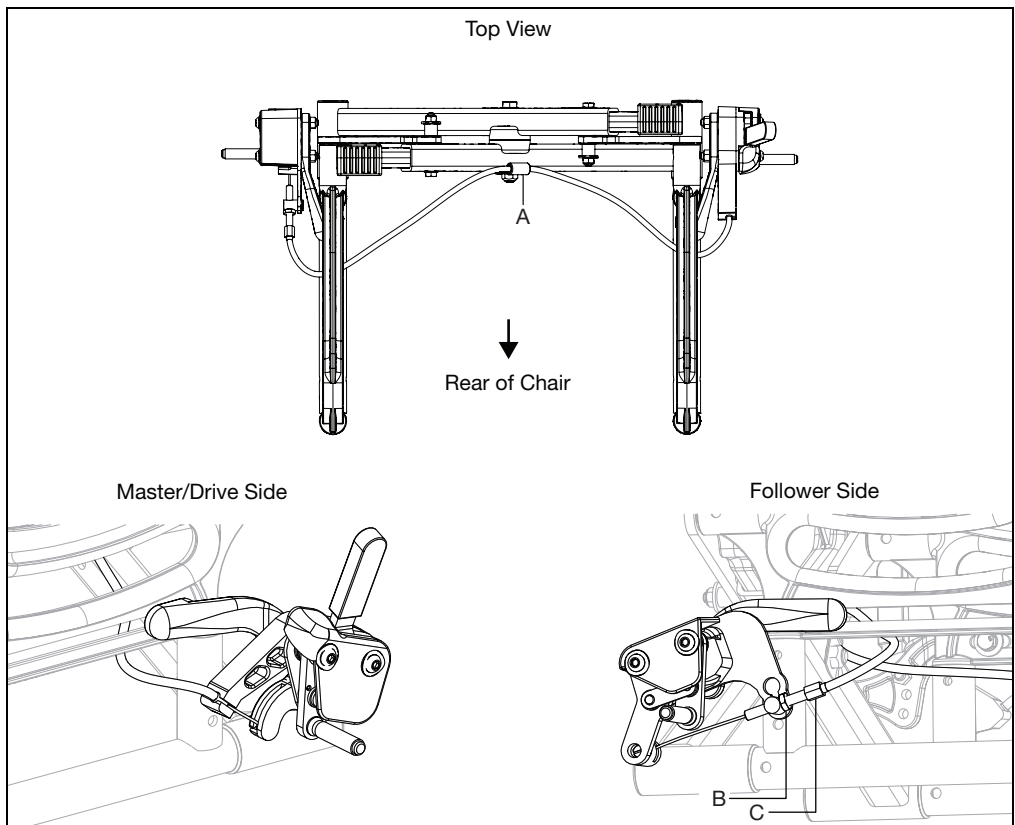
**NOTE:** Slide the follower assembly and wheel lock mount assembly along the frame so the front most nut (C) is approximately 1/4" from tire. Once in position, secure by tightening to 144 in/lbs.



# Hemi Wheel Lock

5. Route the cable as shown below and secure in the middle by removing nut and installing a P-Clip between the nylon washer and cross tube. Reinstall nut to secure P-Clip.
6. On the master/drive side, install the cable barrel to the wheel lock actuator and the cable conduit as shown below.
7. On the follower side, attach the key hole barrel to the follower plate and insert the pinch bolt into the follower arm as shown.
8. Adjust the cables by threading the adjuster in or out of the keyhole mounting barrel. Once tested, with no user in the chair, secure by tightening the jam nut.

Cable Part Numbers			
Wheel Size	Chair Width	Standard Frame	Extended Frame
12"	Small (10-12W)	111606	111546
	Medium (12-14W)	111606	111546
	Large (14-16W)	111545	002468
	XL (16-18W)	111545	002468
16"	Small (10-12W)	111605	111545
	Medium (12-14W)	111605	111545
	Large (14-16W)	111606	111546
	XL (16-18W)	111606	111546



# Hemi Wheel Lock

## Hemi Wheel Lock Restrainer Clip

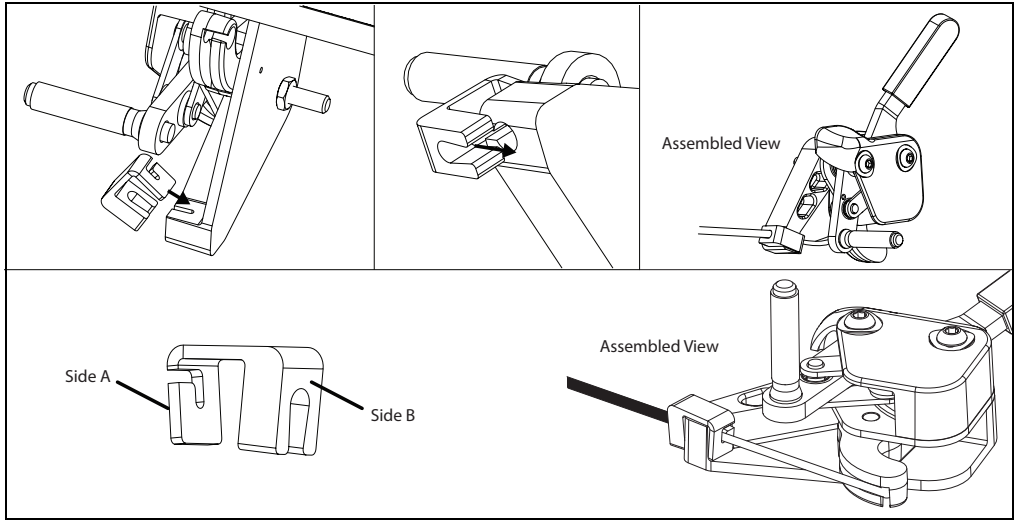
### Installing Hemi Wheel Lock Restrainer Clip

1. Push "A" side of the restrainer clip over the slotted end of the hemi wheel lock bracket and the cable.
2. Pull the "B" side down and over the other side of hemi wheel lock bracket and the cable.

**NOTE: The restrainer clip should be oriented so the restrainer clip actually covers the cable slot on the bracket.**

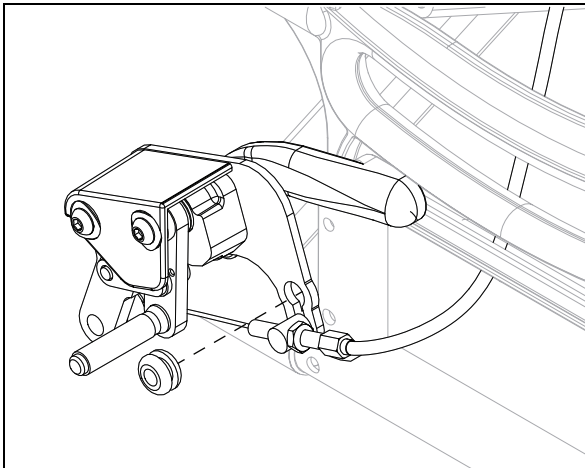
### Removing Hemi Wheel Lock Restrainer Clip

1. Hold the bracket and cable in place while pulling one end of the restrainer clip off.
2. Hold the bracket and cable in place while removing the opposite end of the restrainer clip.



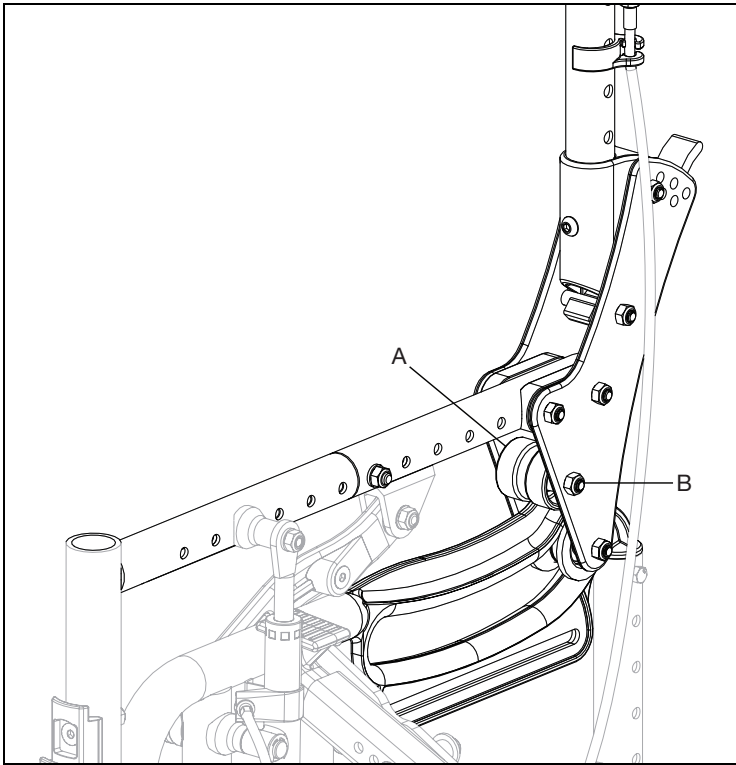
## Rubber Grommet

1. Push the rubber grommet into the hole shown below on the follower side of the hemi wheel lock. This rubber grommet helps secure the cable in place.



## Adjusting Upper Roller

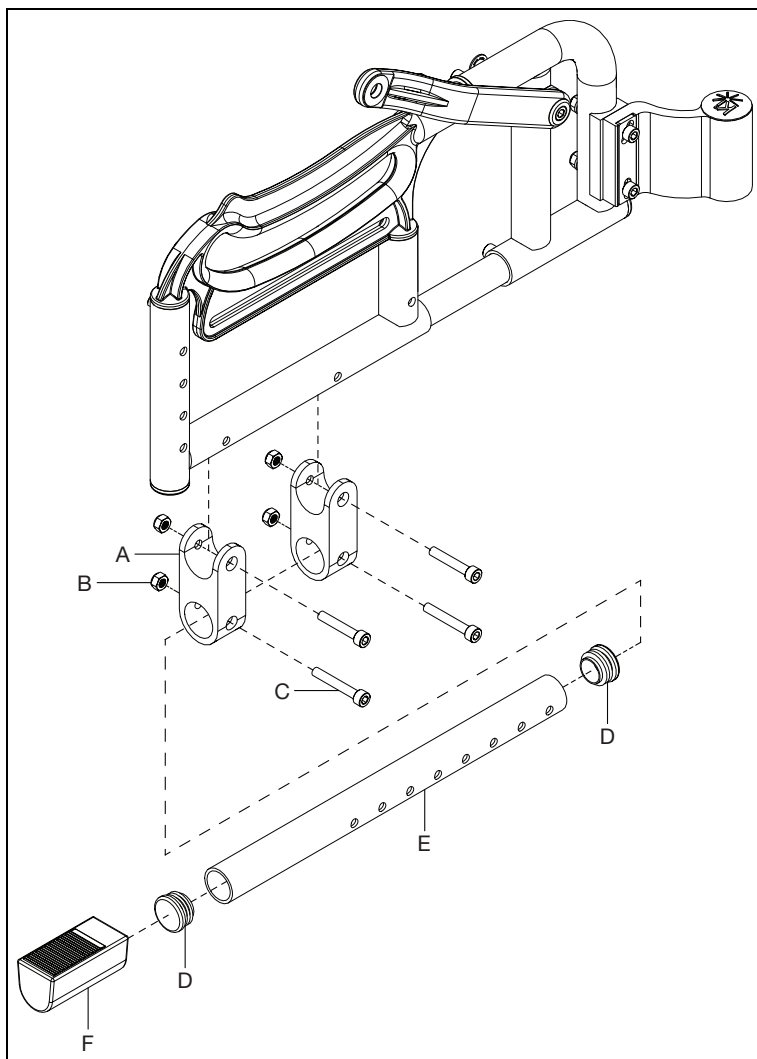
If excessive in/out play ("racking") occurs in the back canes, the upper rollers can be adjusted. If needed, tighten nut (B) slightly until racking is minimized while still allowing the chair to tilt without binding. Repeat for opposite side. If binding is occurring, loosen nut (B).





# Tipping Lever

1. Install the mount brackets (A) to the bottom of the frame with two bolts (C) and two nuts (B) using a 5mm Allen wrench and a 10mm wrench.
2. Push the tube end plugs (F) into the tipping lever (G) and then push the tipping lever grip (H) onto the end of the tipping lever. The tipping lever grip should be installed on the end of the tube away from the predrilled holes as shown in the image below.
3. Insert the tipping lever assembly into the mount brackets. Tube location can be moved forward or backward to accommodate different wheel locations. Once position is determined, secure in place with two bolts (C) and two nuts (B) using a 5mm Allen wrench and a 10mm wrench.

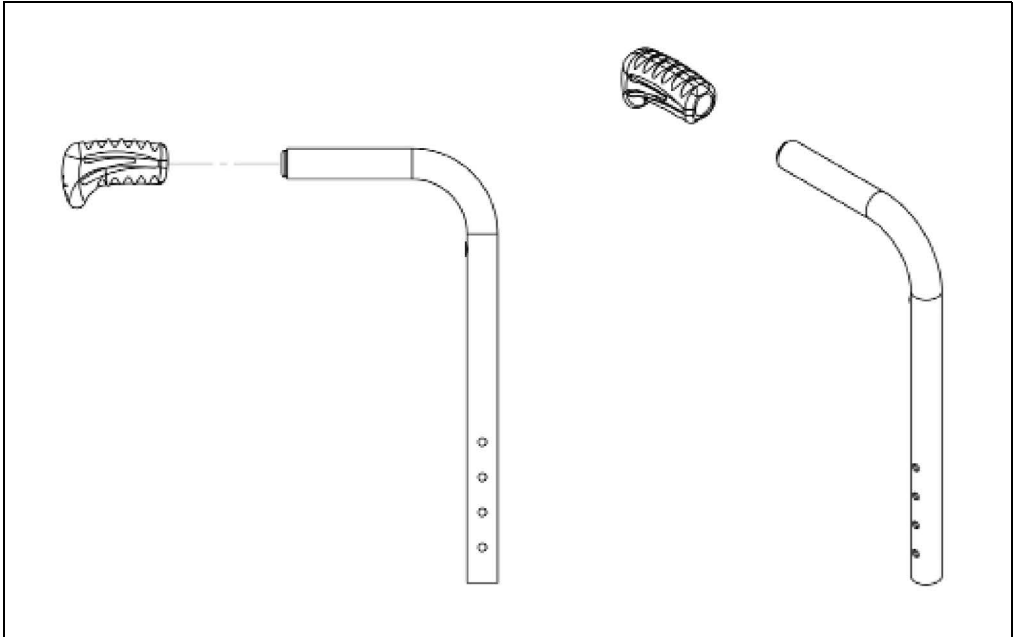


# Ergo Grip

## Installation

**NOTE: The Ergo Grips must be at room temperature prior to installation.**

1. Ensure that the old grip has been completely removed and the push handle tube is clean and dry.
2. Apply isopropyl alcohol wipes (70%), P/N 102932, to push handle tube and inside of Ergo Grip.
3. Immediately after applying the isopropyl alcohol wipes, push grip over end cap until cap bottoms out in grip.
4. Align grip to the centerline plane of the backtube.
5. Allow to dry for 30 minutes prior to use.





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