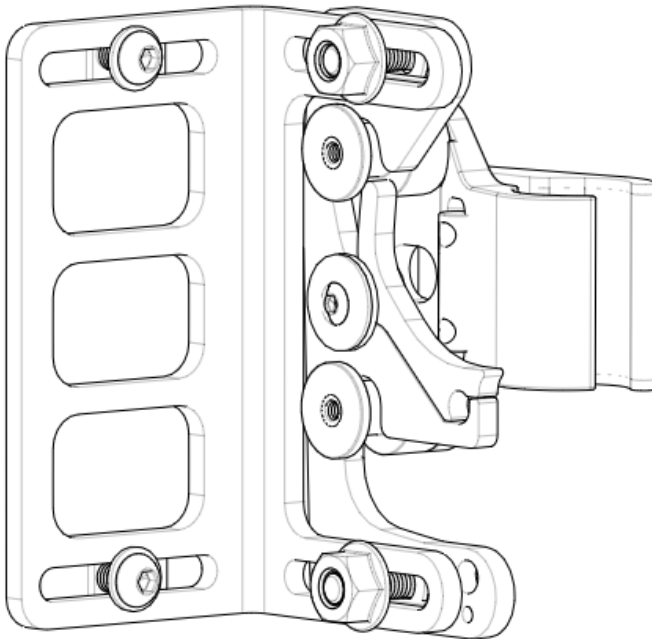


**Stealth Products**<sup>®</sup>

Backs and Support



**OWNER'S MANUAL**



## Quick Release Hardware

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True Forming Back's Quick Release Hardware  
Owner's Manual

Stealth Products strives for 100% customer satisfaction. Your complete satisfaction is important. Please contact us with feedback or to suggest changes that may help improve the quality and usability of our products. You may reach us at:

Stealth Products, LLC  
104 John Kelly Drive, Burnet, TX 78611  
Phone: (512) 715-9995      Toll Free: 1(800) 965-9229  
Fax: (512) 715-9954      Toll Free: 1(800) 806-1225  
info@stealthproducts.com      www.stealthproducts.com

## General

Read and understand all instructions prior to the use of the product. Failure to adhere to instructions and warnings in this document may result in property damage, injury, or death. Product misuse due to failure to adhere to the following instructions will void the warranty.

Immediately discontinue use if any function is compromised, if parts are missing or loose, or if any component shows signs of excessive wear. Consult with your supplier for repairs, adjustments, or replacements.

## Important Information!

All persons responsible for fitting, adjustment, and daily use of the devices discussed in these instructions must be familiar with and understand all safety aspects of the devices mentioned. In order for our products to be used successfully, you must:

- Read and understand all instructions and warnings.
- Maintain our products according to our instructions on care and maintenance.
- Ensure devices should be installed and adjusted by a trained technician.

## Supplier Reference

Supplier: \_\_\_\_\_

Telephone: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Purchase Date: \_\_\_\_\_

Model: \_\_\_\_\_

These installation instructions will guide you through the options and possibilities with the product. They are written with the expressed intent of use with standard configurations. They contain important safety and maintenance information, as well as describe possible problems that can arise during use. For further assistance, or more advanced applications, please contact your supplier or Stealth Products at (512) 715-9995 or toll free at (800) 965-9229.

Always keep the instructions in a safe place so they may be referenced as necessary.

All information, pictures, illustrations, and specifications are based on the product information that was available at the time of printing. Pictures and illustrations shown in these instructions are representative examples and are not intended to be exact depictions of the various parts of the product.

### **CAUTION**

These products are designed to be fitted, applied, and installed exclusively by a health care professional trained for these purposes. The fitting, application and installation by a non-qualified individual could result in serious injury.

## Ordering Documentation

You can download additional copies of this user manual by accessing the Stealth website ([www.stealthproducts.com](http://www.stealthproducts.com)) and searching "TFB Hardware Quick Release Owner's Manual" in the search bar at the top of the page.

Our products are designed, manufactured, and produced to the highest of standards. If any defect in material or workmanship is found, Stealth Products, LLC will repair or replace the product at our discretion. Any implied warranty, including the implied warranties of merchantability and fitness for a particular purpose, shall not extend beyond the duration of this warranty. Stealth Products, LLC does not warrant damage due to, but not limited to:

- misuse, abuse, or misapplication of products; and/or
- modification of products without written approval from Stealth Products, LLC.

Any alteration or lack of serial number, where applicable, will automatically void this warranty.

Stealth Products, LLC is liable for replacement parts only. Stealth Products, LLC is not liable for any incurred labor costs.

No person is authorized to alter, extend, or waive the warranties of Stealth Products, LLC.

Stealth Products, LLC warrants against failure due to defective materials or workmanship:

Covers: 180 days

Hardware: 5 years

Electronics: 3 years

## In Case of Product Failure

In the event of product failure covered by our warranty, please follow the procedures outlined below:

1. Call Stealth Products at (512) 715-9995 or toll free at (800) 965-9229.
2. Request a Return Authorization (RA) from the Returns Department and follow documentation instructions.

<b>1.0 Customer Satisfaction .....</b>	<b>i</b>
<b>2.0 Important Information.....</b>	<b>ii</b>
<b>3.0 Introduction .....</b>	<b>iii</b>
<b>4.0 Warranty .....</b>	<b>iv</b>
<b>5.0 Table of Contents .....</b>	<b>v</b>
<b>6.0 Warning Labels.....</b>	<b>vii</b>
6.1 Warning Labels .....	vii
6.2 Limited Liability.....	vii
6.3 Testing .....	vii
<b>7.0 Parts and Accessories .....</b>	<b>1</b>
7.1 Quick Release Hardware Package .....	1
7.2 Quick Release Hardware Replacement Parts.....	1
7.3 QR Kit - Quick Release Mount .....	2
7.4 QR Kit - Quick Release Latch Assembly .....	3
7.5 QR Kit - Quick Release Back Cane Clamp.....	4
<b>8.0 Features.....</b>	<b>5</b>
8.1 Quick Release Hardware Features .....	5
8.2 Angle Adjustment.....	5
8.3 Depth Adjustment .....	5
8.4 Width Adjustment .....	6
8.5 Cane Compatability.....	7

<b>9.0 Installation Instructions .....</b>	<b>9</b>
9.1 Preparations .....	9
9.2 Tools .....	9
9.3 Installation Plan .....	9
9.4 Required Tools/ Torque Chart .....	10
9.5 Installing the Quick Release to the Back.....	11
12.6 Clamp Assembly to Wheelchair Back Canes .....	13
<b>10.0 WC-20 Information .....</b>	<b>14</b>
10.1 WC-20 Quick Release Hardware.....	14
10.2 Before Transit .....	14
10.3 Belt Placement.....	15
10.4 User Safety .....	17
<b>11.0 Maintenance.....</b>	<b>20</b>
11.1 Maintenance.....	20
11.2 Cleaning .....	20
<b>12.0 Notes.....</b>	<b>21</b>

## Warning Labels

## 6.1

Warnings are included for the safety of the user, client, operator and property. Please read and understand what the signal words **DANGER, WARNING, CAUTION, NOTICE,** and **SAFETY** mean, how they could affect the user, those around the user, and property.

### **DANGER**

Identifies an **imminent** situation which, if not avoided, may result in **severe injury, death, and/or property damage.**

### **WARNING**

Identifies a **potential** situation which, if not avoided, may result in **severe injury, death, and/or property damage.**

### **CAUTION**

Identifies a **potential** situation which, if not avoided, may result in **minor to moderate injury and/or property damage.**

### **NOTICE**

Identifies important information not related to injury, but possible **property damage.**

### **SAFETY**

Indicates steps or instructions for safe practices, reminders of safe procedures, or important safety equipment that may be necessary.

## Limited Liability

## 6.2

Stealth Products, LLC accepts no liability for personal injury or damage to property that may arise from the failure of the user or other persons to follow the recommendations, warnings, and instructions in this manual.

Stealth Products, LLC does not hold responsibility for final integration of final assembly of product to end user. Stealth Products, LLC is not liable for user death or injury.

## Testing

## 6.3

Initial setup and driving should be done in an open area free of obstacles until the user is fully capable of driving safely.



## Quick Release Hardware Package

7.1

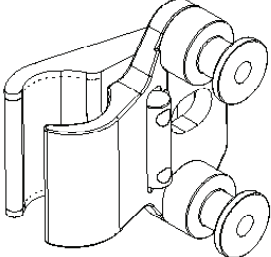
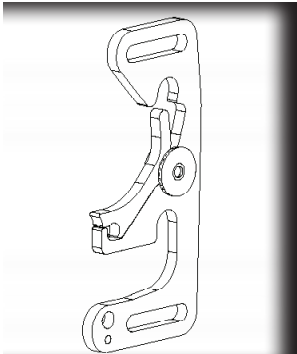
The following hardware is included for the mounting hardware:

Part Number	Product Description	
BR1102	Quick Release Complete Mounting Kit	

## Quick Release Hardware Replacement Parts

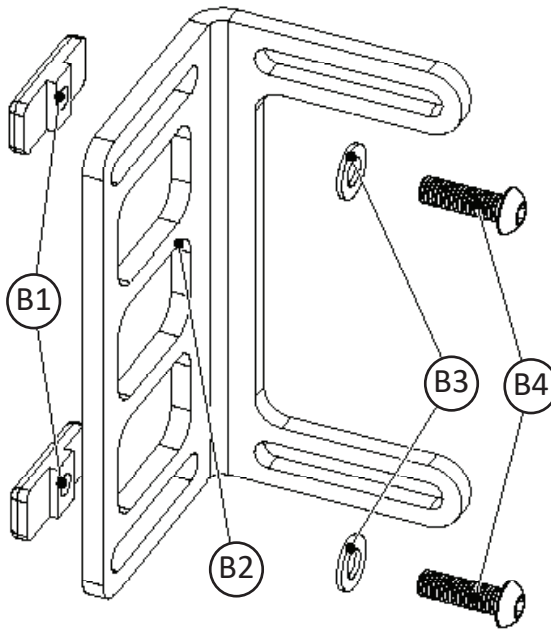
7.2

The following are available as replacement parts for the mounting hardware:

Part Number	Product Description	
BR1100	Quick Release Back Support Clamp	
BR1101	Quick Release Latch Assembly	

## QR Kit - Quick Release Mount

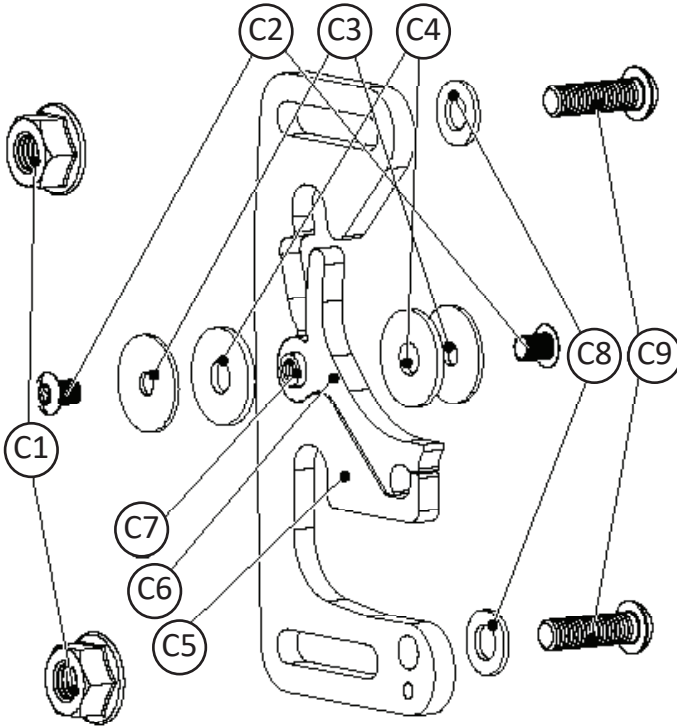
## 7.3



ID	Part Number	Description	Qty.
B1	TFB200-66	T-Nut, True Forming Back	2
B2	TFB200-53	L-Bracket	1
B3	1/4 SSW	1/4" Stainless Steel Washer	2
B4	1/4-20 x 5/8" BHS	1/4-20 x 5/8" Button Head Cap Screw	2

## QR Kit - Quick Release Latch Assembly

## 7.4

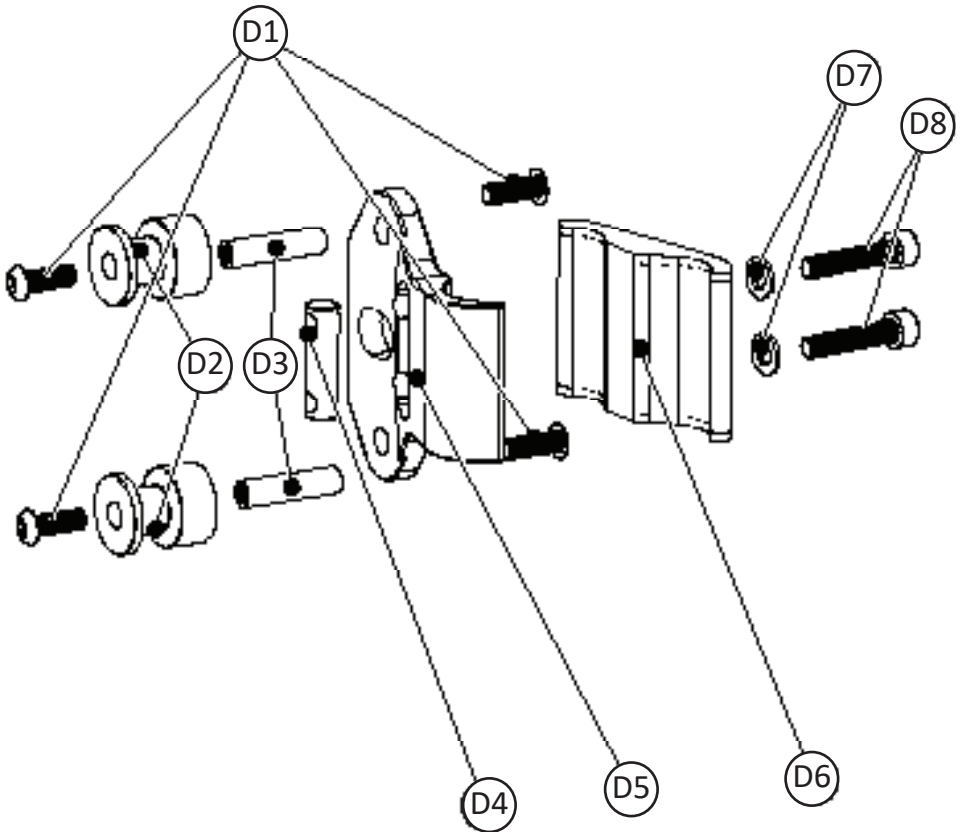


ID	Part Number	Description	
C1	1/4-20 LNN	1/4-20 Lock Nut w/ Nylon Insert	2
C2*	8-32 x 3/16 BHS	8-32 x 3/16" Button Head Cap Screw	2
C3*	8x 3/4 FW	8 x 0.75" Fender Metal Washer	2
C4*	1/4x.28x.74x.06 FW	1/4" Flat Plastic Washer	2
C5*	BR5012	Removable Boomerang	1
C6*	BR5013	Lock Piece	1
C7*	8-32x1/4x5/16 FTS	8-32x1/4"x5/16" Female Threaded Standoff	1
C8	1/4 SSW	1/4" Stainless Steel Washer	2
C9	1/4-20 x 5/8 BHS	1/4-20 x 5/8" Button Head Cap Screw	2

Note: Items C2-C7 come pre-assembled as a single piece.

## QR Kit - Quick Release Back Cane Clamp

## 7.5



ID	Part Number	Description	
D1	10-32 x 1/2 BHS	10-32 X 1/2" Button Head Screw	4
D2	BR5008-1	Removable Pulley	2
D3	1/4x1 10-32 TRS	1/4" x 1" 10-32 TRS	2
D4	BR5034	Backingpin	1
D5	BR5003	Quick Release Seatback- Inside Clamp	1
D6	BR5002	Quick Release Seatback- Outside Clamp	1
D7	M5 F2	M5 Flat Washer	2
D8	M5x0.8x25MM SHS	M5 x 0.8 x 25MM Socket Head Cap Screw	2

## Quick Release Hardware Features

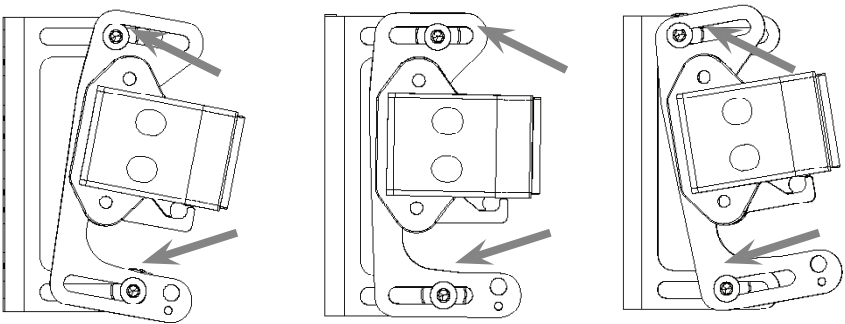
8.1

The **Quick Release** hardware includes features such as angle, width, and depth adjustments.

### Angle Adjustment

8.2

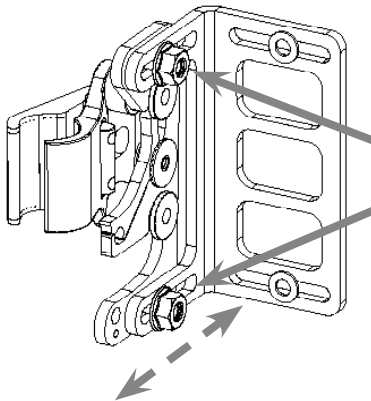
- Approximately 20° of adjustment.
- The loss of seat depth does not occur with angle adjustment.



### Depth Adjustment

8.3

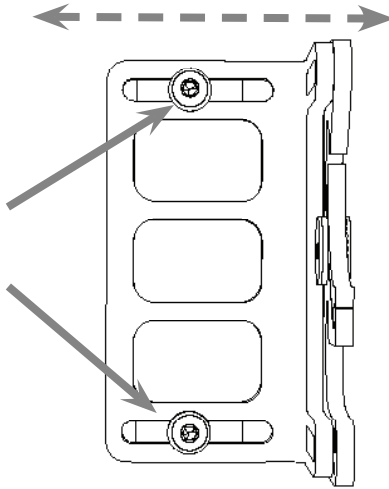
- Approximately 1.25 inches (3.18cm) of depth adjustment.
- Center mounting of hardware positions the back cushion valley behind the back posts.
- Forward mounting of hardware positions the back cushion forward 5/8in.
- Aft mounting of the hardware positions the back cushion rearward 5/8in.



## Width Adjustment

### 8.4

- Approximately  $\pm 1$  inches (2.54cm) of depth adjustment.
- By loosening the screws on the mount, the hardware can be adjusted horizontally to increase the space between the two **Quick Release** assemblies.

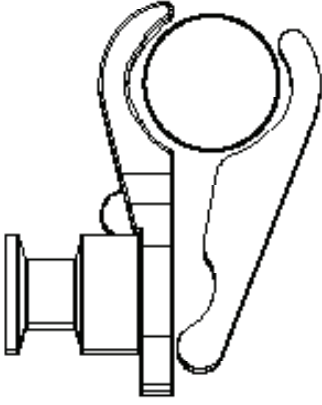


## Cane Compatibility

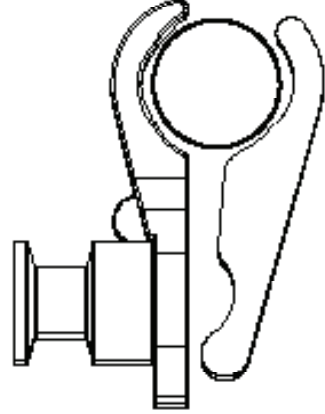
## 8.5

The **Quick Release** hardware mounts to multiple diameter cane clamps without the use of spacers.

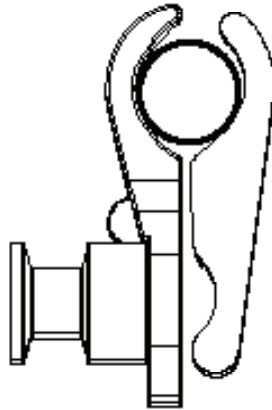
- Hardware is compatible with 1in., 3/4in., and 7/8in. cane diameters.



1" Clamp



7/8" Clamp



3/4" Clamp

# Installation Instructions



## Preparations

### 9.1

Only a qualified service technician may install the **True Forming Back (TFB)** and its accessories.

#### **WARNING**

An incorrect installation of the **TFB** or its accessories may cause damage to the hardware and/or injury to the user.

## Tools

### 9.2

Use the proper tools to install and adjust the **TFB** to the desired position for the user. Ensure all torque specifications are followed.

#### **CAUTION**

The use of improper tools may cause damage to the device. Not tightening to the torque specification can cause components to fail or cause discomfort to the user.

## Installation Plan

### 9.3

Set up an installation plan before beginning the installation. This plan should take into account:

- where the **TFB** will be placed, as well as applicable laterals and support cushions;
- how the **TFB** will be operated and the **Quick Release** functions for the mount and laterals; and
- the amount of clearance sufficient for other hardware and accessories.

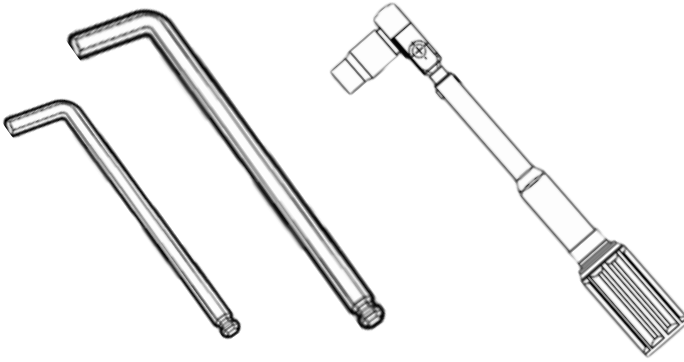
#### **CAUTION**

Any connection must always be secured with all delivered screws. Only use screws provided in the package.

## Required Tools

## 9.4

The tools needed to complete the installation are as follows:



Hardware	Component Use
5/32" Hex Key	Button Head Screws on Mount (B4), Latch Assembly (C9)
3/32" Hex Key	Button Head Screws on Latch Assembly (C2)
1/8" Hex Key	Button Head Screws on Back-Post Clamp (D1)
4mm Hex Key	Socket Head Screws on Back-Post Clamp (D8)

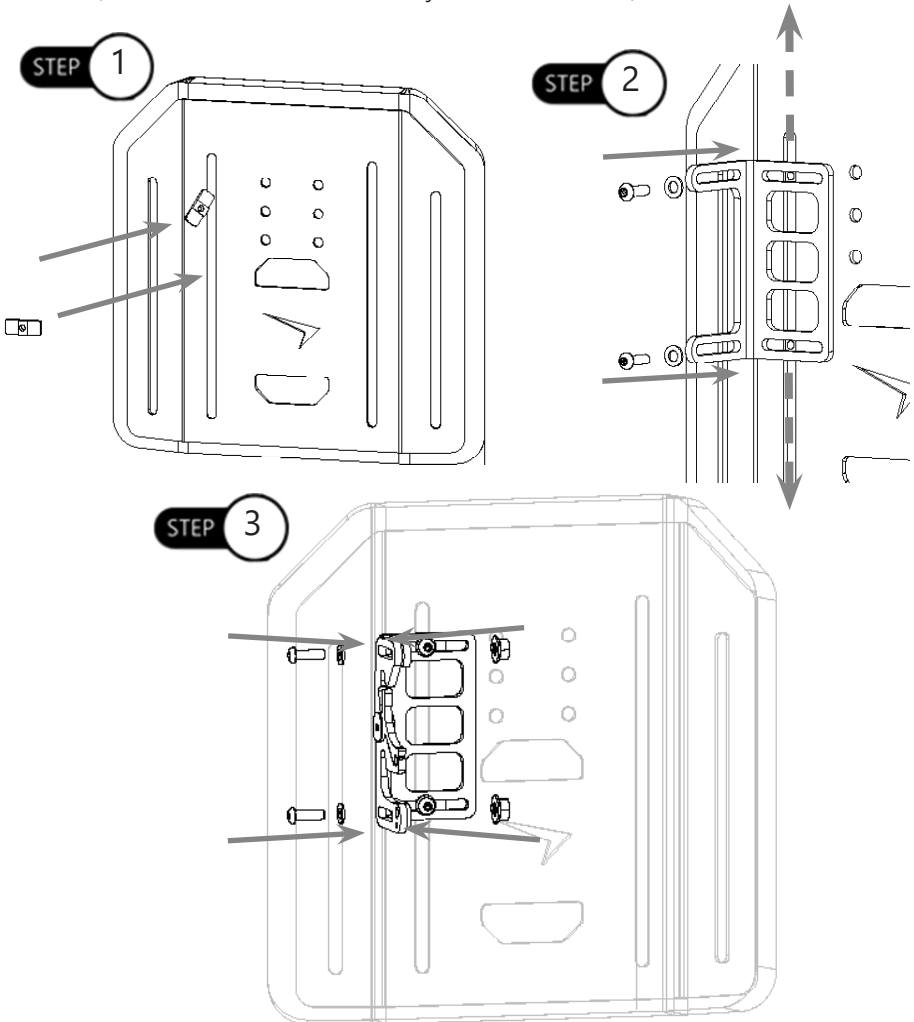
Tools are not provided. Refer to the manuals for additional accessories for the list of tools required for their installation.

Screws	Torque Specifications
1/4-20 x 5/8" Button Head Screw (B4)	125in-lbs
8-32 x 3/16" Button Head Screw (C2)	30in-lbs
1/4-20 x 5/8" Button Head Screw (C9)	125in-lbs
10-32 x 1/2" Button Head Screw (D1)	65in-lbs
M5 x 0.8 x 25mm Socket Head Screw (D8)	12nM

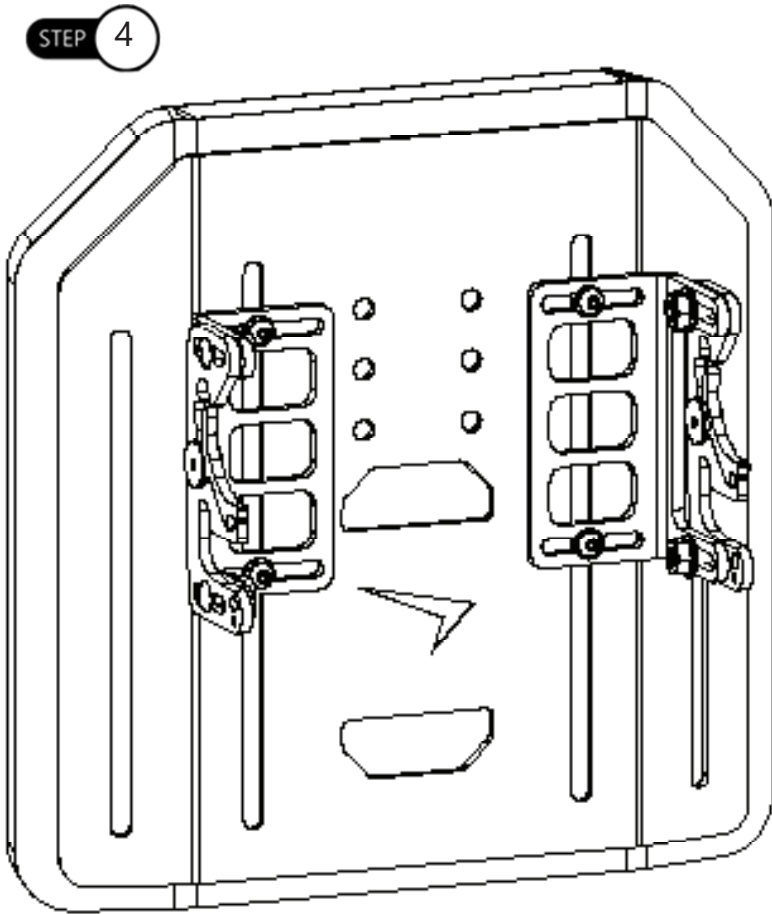
## Installing the Hardware to the Back

### 9.5

- Step One:** Take the T-nuts (B1) and slide them behind the aluminum frame of the back.
- Step Two:** Line the L-bracket (B2) with the T-nuts (B1) and ensure it is in the appropriate horizontal and vertical position before securing it with two 1/4-20 x 5/8" button head screws (B4). Ensure each screw gets a 1/4" washer (B3) before tightening to 125in-lbs of torque.
- Step Three:** Take the latch assembly (C) and attach it with two 1/4-20 x 5/8" button head screws (C9) to the L-bracket (B2). Each screw gets a 1/4-20 lock nut (C1) and 1/4" washer (C8) to secure it. Before tightening to 125in-lbs of torque, ensure the assembly is positioned to the necessary depth and angle.
- (See Sections 8.2, 8.3 and 8.4 for adjustment information.)



**Step Four:** With one of the hardware assemblies (C) attached, attach the second hardware assemblies (C) repeating Steps 1-3.



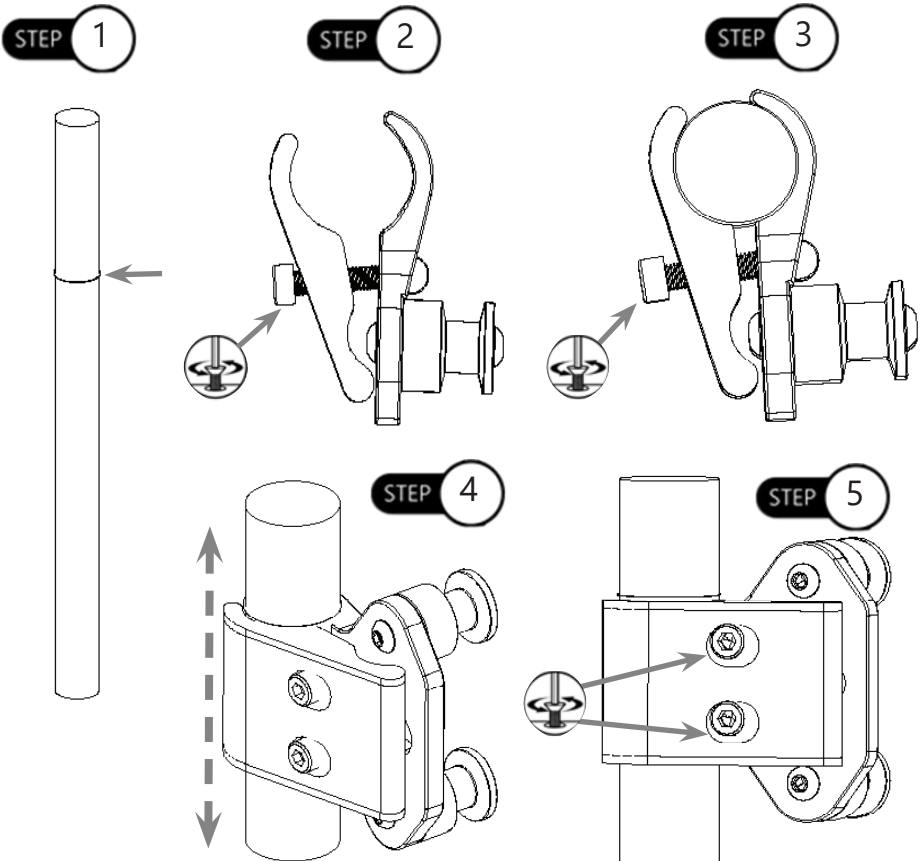
***NOTICE***

Avoid overtightening or undertightening the latch lever assembly bolts (C2), as this may make the removal of the back difficult.

## Clamp Assembly to Wheelchair Back Canes

### 9.6

- Step One:** Visually determine the desired height of the **True Forming Back**. Mark on each back cane the location necessary to attach the clamp assemblies.
- Step Two:** Loosen the M5 x 0.8 x 25mm socket head cap screws (D8) and with two fingers, pinch and hold the back of the cane clamp to open in order to slide the clamp assembly over the top of the back cane (receiving cane facing inward). Screws do not have to be completely removed from hardware to slide clamp over the cane.
- Step Three:** Slightly tighten each M5 screw (D8). Align clamp assembly parallel to the wheelchair seat base.
- Step Four:** To achieve proper alignment, slightly move the mounting hardware in or out and/or up and down. Make adjustments until the backrest smoothly attaches and removes from the top and bottom receiving canes.
- Step Five:** After final adjustments are complete, tighten all screws (D8) to 12nm of torque. This will ensure secure placement and safe operation.



## WC20 Quick Release Hardware

## 10.1

The **True Forming Back's Quick Release** hardware has met WC20 and ISO16840-4 requirements and provisions.

WC20 establishes design/performance requirements and test methods for complete seating systems (i.e., consisting of a seat, back support, and attachment hardware) as they relate to their use as seats in motor vehicles.

### CAUTION

**The WC20-approved Quick Release hardware and True Forming Back should only be used as described in the manufacturer's instructions.**

## Before Transit

## 10.2

- Clients who use wheelchairs should transfer to the vehicle seat and use the vehicle-installed occupant restraint systems.
- Prior to transporting, always check the tie-downs and hardware.
- Look for tears or worn webbing straps on tie-downs and restraints. Replace as necessary. *Never* use torn straps.
- Look for damaged hooks or loose tie-down hardware.
- On the seating system, check for loose screws attaching the hardware to the seat. These should be snug and not over-tightened.
- The **Quick Release** hardware should be securely attached to the back, and the transit pins should be properly inserted into the hardware.

### DANGER

**The WC20-approved Quick Release hardware and the True Forming Back are designed specifically for occupancy when used on wheelchairs that are facing forward in motor vehicles.**

### DANGER

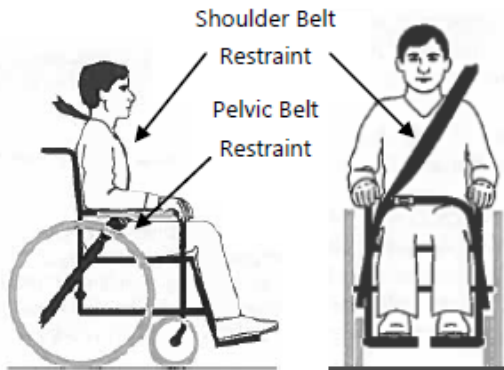
The WC20-approved **Quick Release** hardware and **True Forming Back** have been designed to accommodate the proper use of vehicle-anchored belt restraints and the ratings of the seating systems with regards to a) ease of properly positioning vehicle-anchored belt restraints on the wheelchair passenger, and b) the degree to which proper positioning of belt restraints can be achieved.

**⚠ DANGER**

Do *not* alter or make substitutions to the seating system, its parts or components without first consulting the manufacturer.

**Belt Placement****10.3**

- The pelvic belt restraint should be worn low, across the front of the pelvis, near the junctions of the pelvis and thighs.
- The belt restraint buckles of three-point belt restraints should be placed in contact with the occupant's body and away from wheelchair components.
- The junction of the shoulder belt and pelvic belt of three-point belt restraints should be located near the hip, opposite the shoulder over which the diagonal belt crosses, and not near the midline of the occupant.
- Upper torso belt restraints should fit directly over, and in contact with, the middle of the shoulder.

**Proper Positioning of Belts on Occupant****⚠ CAUTION**

Belt restraints should be adjusted to fit as snugly as possible, consistent with user comfort.

## Improper Positioning of Belts on Occupant



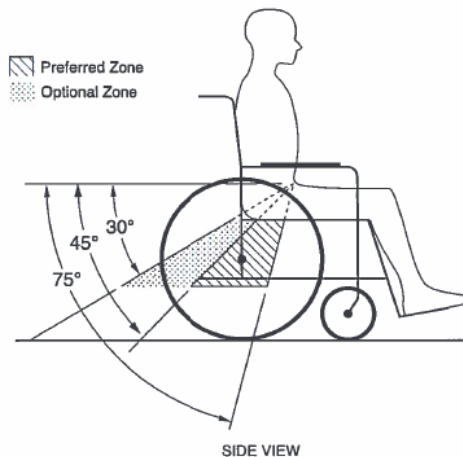
- Belt restraints should not be routed outside of the wheelchair wheels or over the wheelchair arm supports and should not be held away from the body by wheelchair components or parts.

### SAFETY

Belt restraints should not be worn twisted in a manner that reduces the area of contact of the belt webbing with the occupant.

Both pelvic-belt and shoulder-belt restraints that comply with RESNA WC-4:2012, Section 18 and/or 4.6, 5.2, 5.3 or RESNA WC-4:2012, Section 19 should be used to limit occupant movement in a crash, and to reduce the likelihood of occupant ejection from the vehicle and/or injurious contact of the occupant with the vehicle interior.

The pelvic belt should be angled between  $30^\circ$  and  $75^\circ$  horizontally when viewed from the side, and ideally between  $45^\circ$  and  $75^\circ$  horizontally, as shown in the figure below.





 **WARNING**

Back supports with adjustable recline angles should not be tilted back more than 30° to the vertical during travel in vehicles unless necessary for the medical and postural needs of the wheelchair occupant.

 **WARNING**

If the back support must be adjusted to an angle greater than 30° to the vertical during travel, the upper shoulder belt anchor point should be adjusted rearward to maintain belt contact with the wheelchair occupant's shoulder and chest.

## Trays

Wheelchair-mounted rigid trays not specifically designed for use during travel in vehicles should be:

- Removed and secured separately in the vehicle, or
- Secured to the wheelchair so they will not break free in a crash;
- Positioned with a gap of at least 3in. (75mm) between the back edge of the tray and the wheelchair occupant's abdomen/chest, so as not to interfere with proper belt-restraint use; and
- Equipped with energy-absorbing padding between the back edge of the tray and the wheelchair occupant.

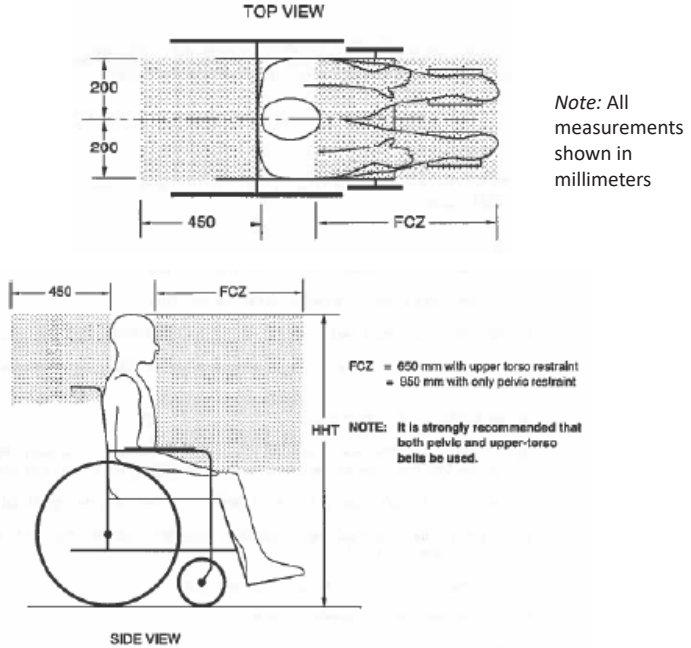
## User Safety

### 10.4

**The use of a postural pelvic belt attached to the wheelchair base or seat frame is encouraged during travel, but these belts should be positioned so that they do not interfere with the proper positioning of crashworthy belt restraints, and they should not be relied upon for occupant protection in crash situations unless the postural belt has been designed to comply with, and perform to, the requirements in 4.6, 5.2, and 5.3 of RESNA WC-4:2012, Section 19.**

Sufficient forward and rearward clear space should be provided around the wheelchair occupant.

The forward clear-space zone (FCZ) needs to be larger when not utilizing a shoulder-belt restraint.



When mounting the WC20-approved **Quick Release** hardware to your **True Forming Back**, refer to the *Installation Instructions* section starting on page 8.

Torque specifications for the hardware are listed in the *Installation Instructions* section on page 10.

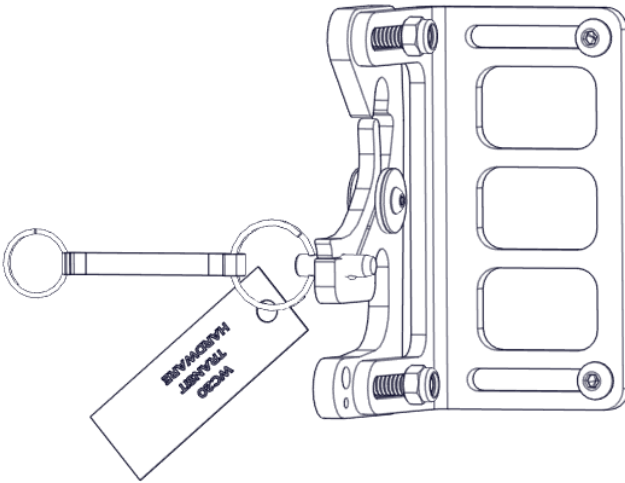
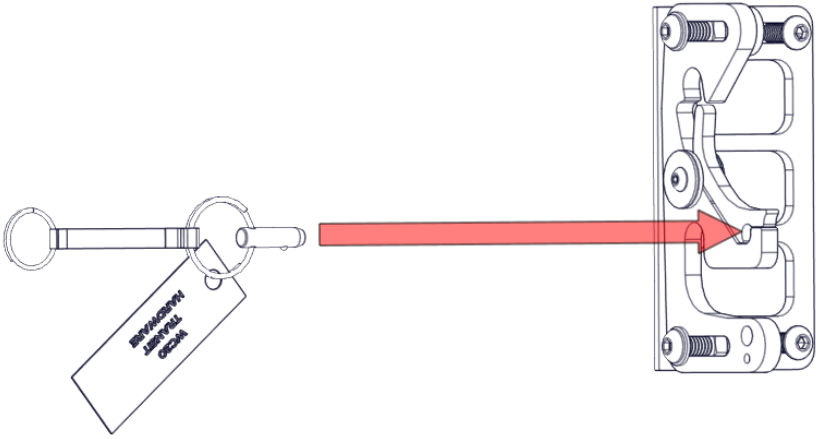
**⚠ DANGER**

**The WC20-approved Quick Release hardware and True Forming Back are designed ONLY for use with wheelchair frames that have been successfully crash-tested to the frontal-impact requirements of RESNA WC-4:2012, Section 19**

**⚠ WARNING**

The WC20-approved **Quick Release** hardware and **True Forming Back** *must* be used on a wheelchair frame that provides four securement points and pelvic-belt anchor points that conform to the requirements of RESNA WC-4:2012, Section 19.

*Note:* The **Quick Release** hardware is WC20-compliant **ONLY** when both spring-loaded locking pins have been inserted into the hardware, as displayed below:



## Maintenance

### 11.1

These care and guideline instructions will keep hardware and covers in good condition for a longer period of time and prevent damage:

- Routinely check and re-tighten all fasteners to their proper torque specifications. Reference the installation manual to find proper torque specifications.
- Repair or replace parts as needed.
- Gently remove dust and dirt from hardware with a soft, damp cloth.

## Cleaning

### 11.2

- Use a soft, damp cloth to clean the hardware.
- Ensure all cleaners are approved for finished steel, aluminum, plastic, and upholstered surfaces.
- Full cleaning and maintenance instructions can be found in the **True Forming Back** manual.

#### **CAUTION**

Always check all mounting hardware, making sure each fastener is properly tightened before using the back support.

#### **SAFETY**

Replace or repair parts as needed.

#### **CAUTION**

250lbs (113.4 kg) user weight limit.

#### **NOTICE**

**Altering a back in any way and/or improper installation will void the warranty.**







Stealth Products, LLC. • [info@stealthproducts.com](mailto:info@stealthproducts.com) • [www.stealthproducts.com](http://www.stealthproducts.com)  
+1(800) 965-9229 | +1(512) 715-9995 | 104 John Kelly Drive, Burnet TX 78611