

## SAFER AUTOMATIC WHEEL LOCK CLEANING PROCEDURES

The material used in Safer Locks is developed by one of America's top corporations, DuPont. The plastic materials used in the locks include Zytel nylon, a component that is strong, durable and slides easily against itself and metals without the use of lubricants.

Even when exposed to water, Zytel will not corrode or degrade.

Safer Locks use only stainless steel and zinc hardware which allow the locks to be washed by any cleaning method without the risk of rust or corrosion.

## SAFER AUTOMATIC WHEEL LOCK WARRANTY

Safer Automatic Wheelchair Wheel Locks are warranted to be free from defects in material and workmanship under normal operating conditions for a period of **TWO YEARS** from the date of purchase.

Safer Automatic Wheelchair Wheel Locks sole obligation under this warranty will be replacement of the automatic wheel locking device and shipping cost.

This warranty does not cover failure due to abuse, misuse, alterations or improper installation performed outside of the Safer Automatic Wheelchair Wheel Lock facility.

Keep this manual and sales slip together for future reference. Proof of purchase or installation date must be provided for warranty service.

Write down the following information about your Safer Automatic Wheelchair Wheel Lock Kit to better help you obtain assistance or service in the event it should ever be needed.

You will need to know your complete wheelchair model and serial number, and the complete Safer Lock Kit part and serial number. The Safer Lock Kit part number is located on the box that the kit was received in. The serial number is on the back of the Lock Pin Assembly.

**Dealer Name:** \_\_\_\_\_

**Date of Purchase:** \_\_\_\_\_

**Safer Lock Kit Model:** \_\_\_\_\_

**Safer Lock Serial Number:** \_\_\_\_\_

**Wheelchair Model:** \_\_\_\_\_

**Wheelchair Serial Number:** \_\_\_\_\_



Manufactured By; United Plastic Molders, Inc.  
105 East Rankin Street • Jackson, MS 39201  
Phone: 800-890-5113 • Fax: 601-353-0411  
[www.SaferWheelchairs.com](http://www.SaferWheelchairs.com)

# INSTALLATION/USER MANUAL

KIT ID: SAFER-SS2-NVA

## FITS THE FOLLOWING WHEELCHAIR MAKES AND MODELS:

- Drive Silver Sport 1 & 2
- McKesson Brand Standard Dual Axle
- Direct Supply Panacea Standard Vinyl
  - NOVA 5000 Series



### **IMPORTANT!**

**Read the *entire* installation manual and review all pictures before starting installation**

**INSTALLATION VIDEOS ARE AVAILABLE ON OUR WEBSITE AT**

**[www.SaferWheelchairs.com](http://www.SaferWheelchairs.com)**



# Installation & User Manual

## Safer Automatic Wheel Lock Kit

### 1 GENERAL

Check all parts for shipping damage. In case of damage, DO NOT USE. Contact Carrier/ UPM for further instructions.

To ensure the safe installation of your Safer Automatic Wheel Lock Kit, these instructions must be followed.

**FOR INSTALLATION OR TECHNICAL ASSISTANCE PLEASE CALL 601-353-3193 x 215**

#### 1.1 Symbols

Signal words are used in this manual and apply to hazards or unsafe practices which could result in personal injury or property damage. See information below for definitions of the signal words.

##### WARNING

Warning indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.

##### CAUTION

Caution indicates a potentially hazardous situation which, if not avoided, may result in property damage or minor injury or both.



Gives useful tips, recommendations and information for efficient, trouble free use

#### 1.2 Overview

##### WARNING

DO NOT use this product or any optional equipment without first completely reading and understanding these instructions and any additional instructional material such as owner's and service manuals supplied with this product or optional equipment. If you are unable to understand the warnings, cautions or instructions, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment; otherwise, injury or damage may occur.

This procedure must be performed by a qualified technician.

After any adjustments, repair or service and before use, make sure that all attaching hardware is tightened securely; otherwise injury or damage may result.



##### WARNING

Sloped Surfaces: Always engage the wheelchairs manual wheel locks while seated on any type of sloped surface. Safer Locks are not designed to engage while the wheelchair is occupied.



##### WARNING

The intended use of Safer Automatic Wheelchair Locks is to safeguard the user from unintended wheelchair roll while transferring to and from the wheelchair in the event that the manual wheel locks are not used.

**CONTINUE TO USE MANUAL WHEEL LOCKS AS NORMAL**

# SAFER WHEELCHAIR SERVICE STAND

A MUST HAVE FOR MANUAL WHEELCHAIR SERVICE, REPAIR & CLEANING

- Solid, secure platform for all types of wheelchair service and repairs
- Unparalleled access for disinfecting wheels and other hard to reach areas
- Lightweight, portable design allows for easy and efficient use while on the road
- Durably built for everyday warehouse use



www.SaferWheelchairs.com



## 6 KIT FIT LIST

INVACARE	Kit Model	Seat Width	Back Height
Tracer EX2	SAFER-IVC	16"-20"	16"
Tracer SX5	SAFER-IVC	16"-22"	16"-18"
9000 SL	SAFER-IVC	16"-20"	ADJ
9000 XT *Dual Axle Frame*	SAFER-IVC	16"-22"	ADJ
9000 XDT	SAFER-IVC	16"-22"	ADJ
Tracer SX5 Recliner	SAFER-IVC-RC	16"-22"	34"
Tracer IV	SAFER-IVC-T4	16"-24"	16"
9000 XT **Super Hemi/Single Axle**	SAFER-IVC-SL	16"-18"	ADJ

MEDLINE	Kit Model	Seat Width	Back Height
Excel Narrow	SAFER-MED	16"	16"
Excel 2000	SAFER-MED	18"	16"
Excel Wide (300 LB Capacity)	SAFER-MED	20"	16"
Excel K3 Lightweight	SAFER-MED	16"-18"	16"
Excel K4 Lightweight	SAFER-MED-K4	16"-20"	ADJ

BREEZY	Kit Model	Seat Width	Back Height
Breezy Ultra 4	SAFER-GT-U4	16"-20"	ADJ
Breezy 600	SAFER-BR-600	16"-20"	ADJ

\* WILL NOT FIT ULTRA HEMI

DRIVE	Kit Model	Seat Width	Back Height
Cruiser III	SAFER-DRV-C3	16"-20"	16"
Silver Sport 1 & 2*	SAFER-SS2-NVA	16"-20"	16"
Viper Plus GT	SAFER-GT-U4	16"-22"	ADJ
Sentra EC	SAFER-DRV	20"-22"	16"

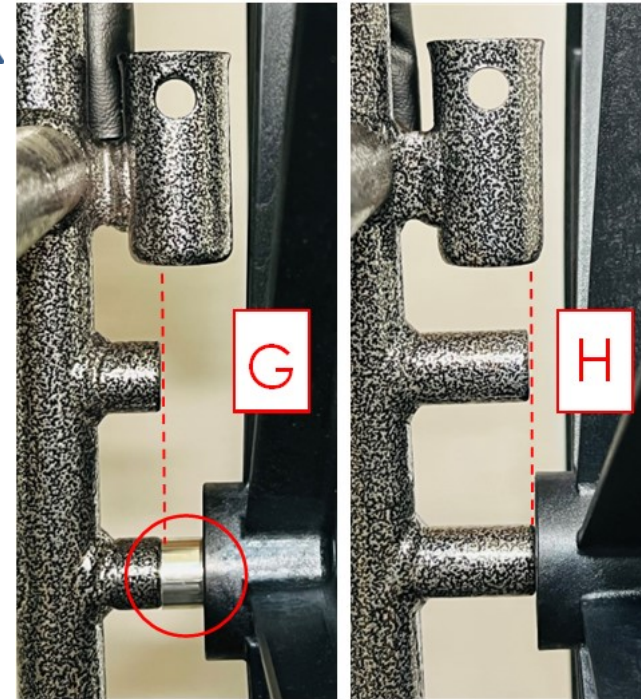
\* ALSO FITS NOVA 5000 SERIES

## 2 GENERAL OVERVIEW



Tools Required: Flathead Screwdriver, Phillips Screwdriver, Socket Wrench Set, Level, Rubber Hammer, (Allen Wrench Included)

### 2.1 Parts Supplied



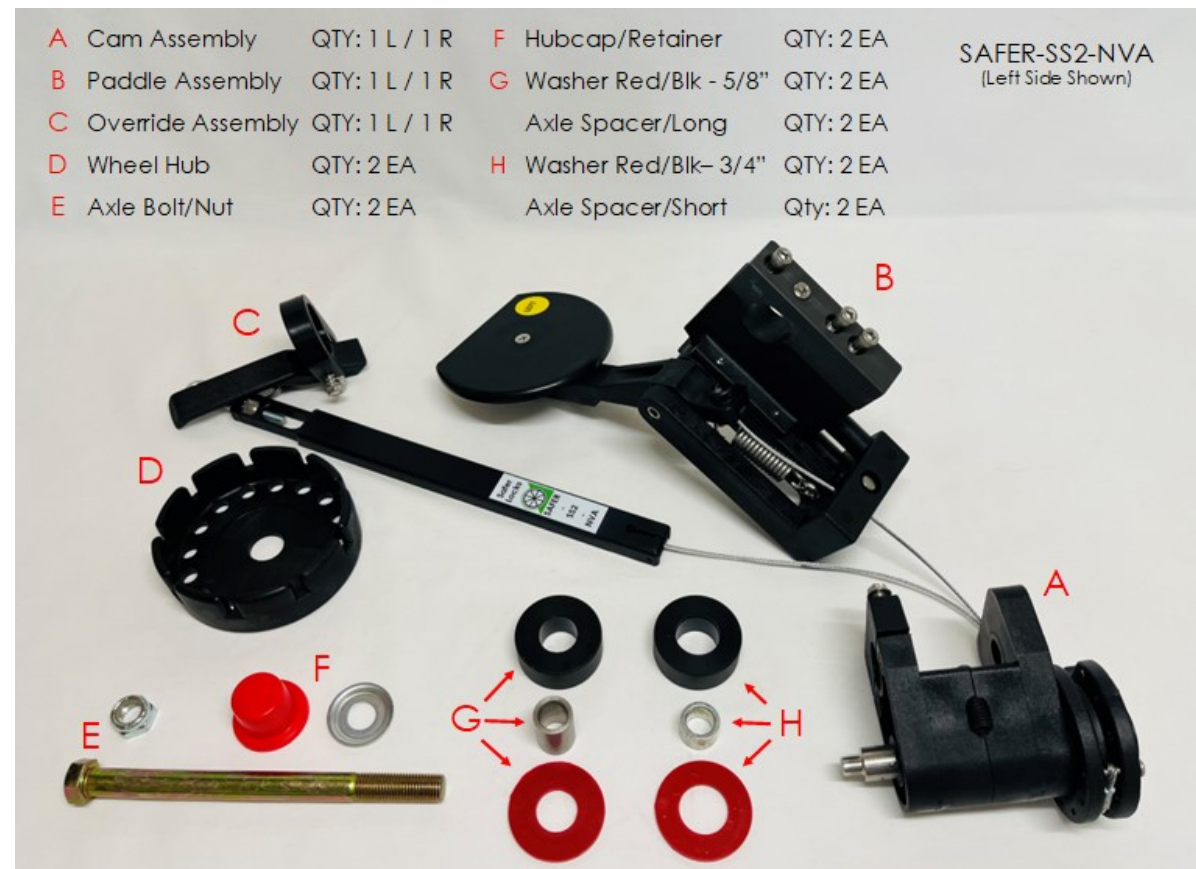
**PROPER WHEEL HARDWARE MUST BE USED DEPENDING ON THE CONFIGURATION OF YOUR WHEELCHAIR:**

Determine if the wheelchair has Axle Spacers (circled on fig. G) or if it has extended axles in place using spacers (fig. H).

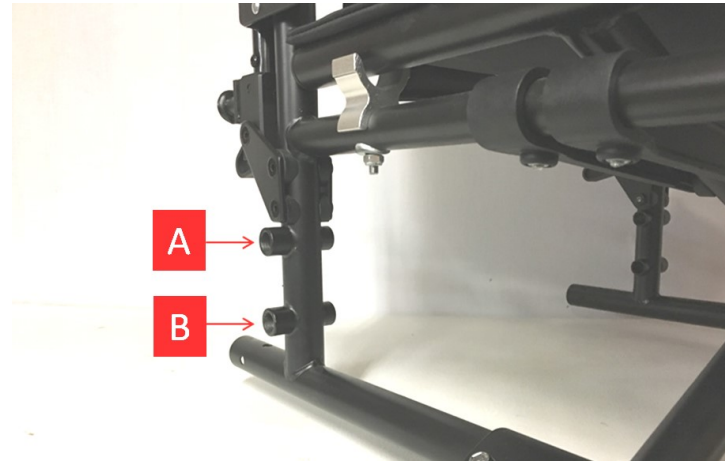
Your Safer Lock Kit comes with two different sets of wheel hardware: one labeled G, and the other labeled H. (See Parts Included Image below)

**Wheelchair with Axle Spacers:** Must use Hardware labeled G.

**Wheelchair with Extended Axles:** Must use Hardware labeled H.



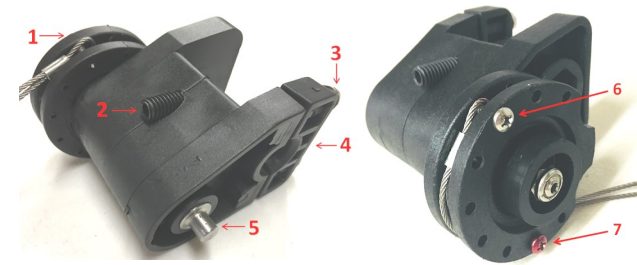
## 2.2 Wheelchair Height Settings



**A: Hemi Height:** Generally 2" lower than Adult/Standard Height, giving a seat to floor height of 17.5", allowing the user to easily propel the wheelchair with their feet.

**B: Adult/Standard Height:** Typically sets seat to floor height at 19.5".

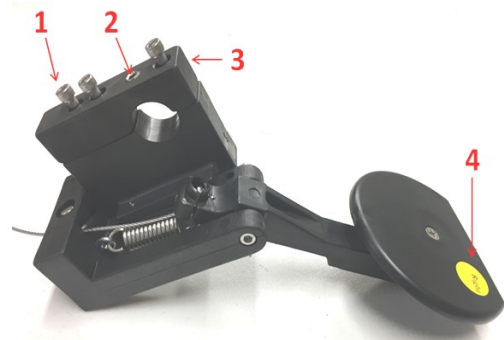
## 2.3 Lock Pin Assembly Breakdown (Lock Assembly)



- 1) Cable Guide
- 2) Set Screw
- 3) Mounting Screw (two per side)
- 4) Cam Clamp
- 5) Lock Pin
- 6) Cable Adjustment Screw
- 7) Guide Screw\*

\*Do not remove. Not on all kits

## 2.4 Paddle Assembly Breakdown



- 1) Mounting Screws (three per side)
- 2) Set Screw
- 3) Paddle Clamp
- 4) Left/Right Label

## 2.5 Override Assembly Breakdown



- 1) Override Handle
- 2) Fine Tune Adjuster
- 3) Override Assembly Adjuster
- 4) Safer Lock Kit ID (Not on all kits)
- 5) Adjuster Cover
- 6) Clamp Screw
- 7) Handle Clamp

## 5 CABLE SETTINGS

### Lock Pin & Override Assembly Cable Adjustment Guide

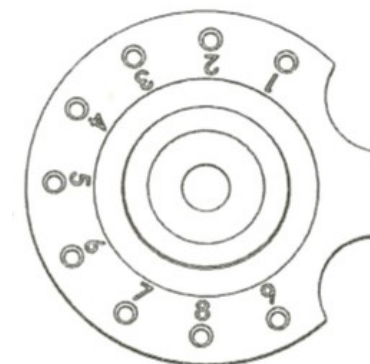
SAFER-SS2-NVA	BACK HEIGHT	HEMI HEIGHT SETTINGS			ADULT HEIGHT SETTINGS		
		LEFT CABLE GUIDE	RIGHT CABLE GUIDE	ADJUSTER SLOT	LEFT CABLE GUIDE	RIGHT CABLE GUIDE	ADJUSTER SLOT
Drive Silver Sport II	16"	4	3 or 4	12-13	5	4 or 5	10-11
NOVA 5000 Series	16"	4	3 or 4	12-13	5	4 or 5	10-11
McKesson Standard	16"	4	3 or 4	12-13	5	4 or 5	10-11
Panacea Standard	16"	4	3 or 4	12-13	5	4 or 5	10-11

**BECAUSE THE X-FRAME ON THE RIGHT OF THE WHEELCHAIR IS FARTHER BACK THAN THE LEFT, THE CABLE SLACK GOING FROM THE RIGHT SIDE LOCK TO THE PADDLE ASSEMBLY MAY NEED TO BE TIGHTENED.**

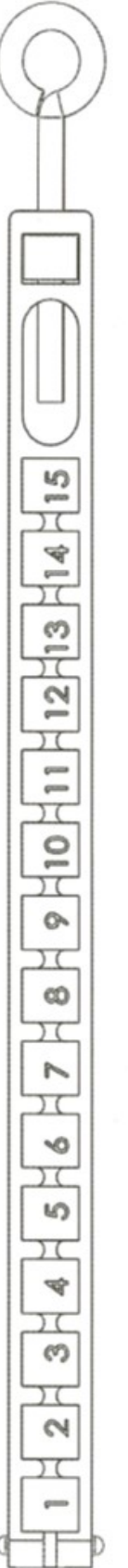
**IF TOO MUCH SLACK** IS IN THE CABLE WITH THE PADDLE ASSEMBLY MOVED AS FAR FORWARD AS POSSIBLE TO FULLY DISENGAGE THE LOCK PIN, REMOVE THE SCREW THAT IS THROUGH THE LOOP IN THE CABLE ON THE CABLE GUIDE.

PULL THE LOOP TO THE NEXT HOLE POSITION AND REINSERT THE SCREW THROUGH THE GUIDE AND LOOP, THEN TIGHTEN.

**LOCK PIN CABLE GUIDE**  
The bottom hole is # 9



**OVERRIDE ADJUSTER**



## 4 TESTING

### 4.1 Testing the Lock Pin Assemblies and Wheels

1. Before removing the wheelchair from the stand the following safety checks **MUST** be performed on both sides:
  - a) Pull the Override Handle and release while turning the wheel. Each time the wheel locks you will hear a “pop”.
  - b) Repeat the process until you have made a full rotation of the wheel.



#### **If the Lock Pin does not lock into all holes, check the following:**

- 1) Turn wheel until the Pin is in line with one of the holes on the Hub. With the Handle released, check that the shoulder of the Lock Pin is flush with the Lock Assembly as seen on Page 7.

If the Pin is drawn into the Lock Assembly, the Paddles are mounted too far forward on the frame causing excessive tension on the cable.

Slide Paddle Assembly rearward to relieve tension,(3.1-11)

If the Lock Pin shoulder is flush and still will not engage in all holes, move to next step.

- 2) Loosen the Lock Assembly Set Screw (2.4-2) one quarter turn at a time until the Lock Pin engages in all holes. LOCK ASSEMBLY SHOULD NOT BE ABLE TO ROCK UP OR DOWN.

If the Lock Pin shoulder is flush and the Set Screw is not over tightened:

- 3) Loosen the Axle Nut one quarter turn at a time until the Lock Pin engages.

### 4.2 Test by USING

1. Remove the wheelchair from the stand and place on the floor.  
**Make sure that the manual wheel locks are not engaged**
  - 1) **PUSH** the chair without squeezing the Override Handles. The wheels should be locked
  - 2) **PUSH** the chair while squeezing the Override Handles. The wheels should be unlocked allowing the wheelchair to roll as normal
  - 3) **SIT** into the chair to ensure that the wheels unlock once seated
  - 4) **STAND** from the chair while pushing back on the arms several times to ensure that the wheels lock as soon as weight is removed from the seat



**Use caution when sitting and standing from the chair while testing. If your Safer Lock Kit fails, it is designed to fail in the LOCKED position.**

**However, if not installed properly, the Lock Pin Assembly may not lock into the Hub.**

**Follow all Safety Guidelines in your Wheelchairs Owners Manual.**

**Contact UPM if your Kit does not work properly after troubleshooting**

## 3 INSTALLATION

### 3.1 Mounting the Assemblies



If not using a Safer Wheelchair Service Stand (Pg. 15) during installation, see below:

**IF AT ALL POSSIBLE, install your Safer Lock Kit with the wheelchair right-side up.**

**SECURELY** block up the wheelchair frame 1-3 feet from the floor, allowing for better access and enabling the wheels to rotate freely.

Your Safer Lock Kit is labeled LEFT or RIGHT as if you were sitting in the wheelchair.



The Cable is pre-set for installation at Adult/Standard Seat to Floor Height. (2.2)

**If installing at Hemi Height the Cable Setting will need to be adjusted. (See pg. 13)**

Continue to Step 2 for Adult/Standard Height installation.

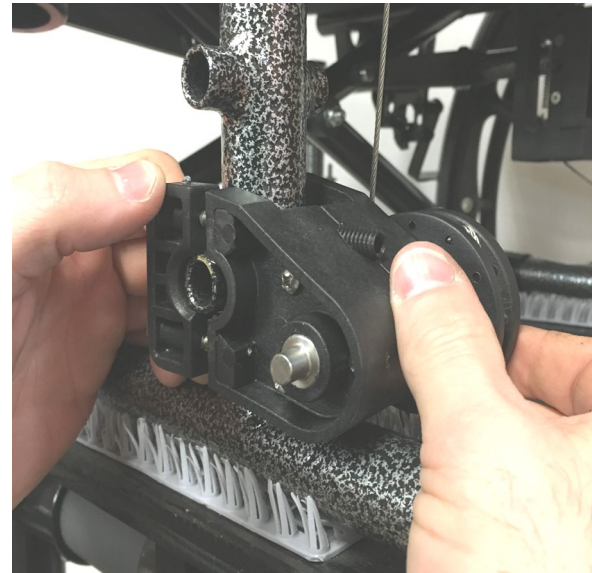
1. Adjusting the Cable Setting for Hemi Height Installation:
  - a) Remove the Cable Adjustment Screw (2.3.6)
  - b) Pull the Cable to the hole placement needed as seen on Pg. 13
  - c) Insert the Adjustment Screw through the cable loop and tighten.
2. Remove the rear wheels. Refer to the wheelchair owner's manual.
  - a) **Discard the Axle Bolt, Nut, and Spacer (if supplied) from the wheelchair.**
  - b) **Replacements are supplied with your kit.**
3. Unpack each side of your Safer Wheel Lock Kit and perform the following:
  - a) Loosen Mounting Screws enough to remove Clamps from the Lock and the Paddle Assemblies. (2.3.3 & 2.4.1)
  - b) Loosen the Clamp Screw on the Override Assembly enough for the Clamp to spread. (2.5.6)
4. Hold the Clamp Screw and spread the Override Handle Clamp enough to slide over the hand grip.
5. Position the Clamp flush with the end of the hand grip and tighten the Clamp Screw.



6. a) Open the Adjuster Cover and move Cable End up or down until the Handle is at about a 45\* angle.  
b) Place the Cable End into the appropriate slot and close the Cover



7. With the Clamp removed, position the Lock Assembly onto the frame around the Axle for desired seat height. (Adult or Hemi Height, see 2.2) Holding the assembly in line, place the Clamp around the axle and thread the two Mounting Screws into the holes just enough to keep the Clamp in place.



20. Open the Adjuster Cover from the top and pull down until the Override Handle is close to 45\* from the handle on the wheelchair.

While holding the Adjuster, pull the cable end up and place in the appropriate slot then close the cover until it snaps.

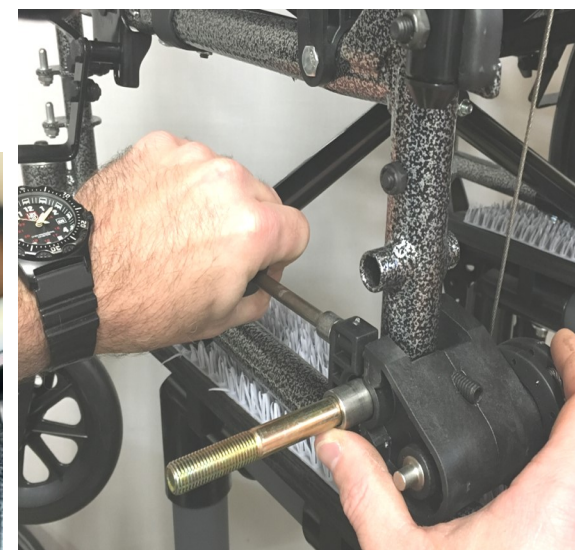
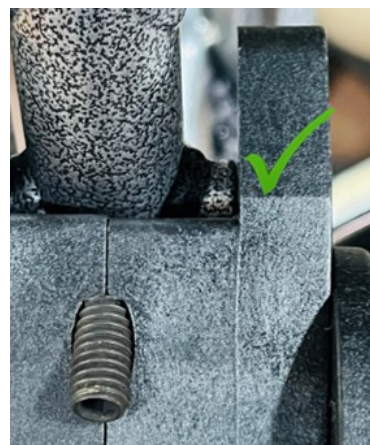
**See CABLE SETTINGS on Page 13**



8. From the inside of the wheelchair, push the supplied Bolt through the Lock Assembly and Axle.

**IMPORTANT:** Make sure that the Bolt is not visible from the inside of the chair between the Lock and Axle. If the Bolt is visible, tap on the Lock from the inside until it sits flush with the Axle.

9. Once the Lock is flush from the inside with the Axle, tighten the Clamp Screws firmly. (Preferably using a 5/16 nut driver, wrench, or socket)



21. Fine Tune the Adjuster to the point that when the handle is squeezed, the Lock Pin is fully retracted into the Lock Assembly and the handle is just touching the bottom of the hand grip.

- a) Loosen the Square Nut at the top of the Adjuster and hold the top of the bolt.
- b) Turn the Knurled Nut until the Handle is in the correct position
- c) Firmly re-tighten Square Nut to lock in place



**SEE NEXT PAGE FOR SAFETY TESTING BEFORE REMOVING WHEELCHAIR FROM STAND**

17. Tighten the nut using a 5/8 socket until the bolt threads are showing.

Spin the wheel while holding the Lock open as done on Pg. 8 to ensure the wheel spins freely. Loosen the nut by 1/4 turns if needed.



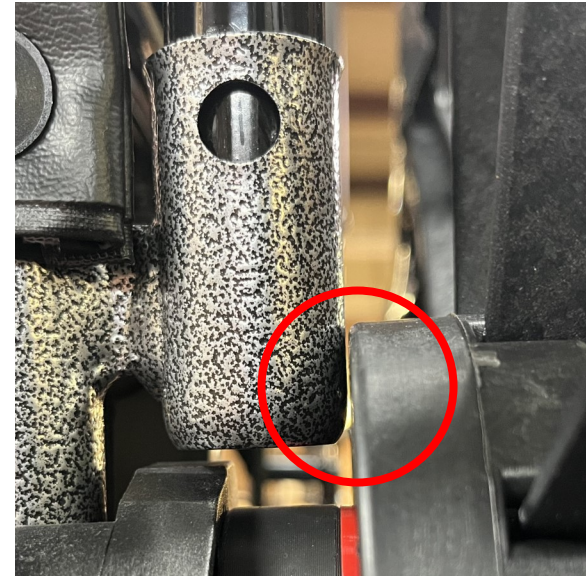
18. Snap the Hub Cap onto the Retainer



**i Hemi Height**

Make sure there is a gap between the arm attachment and the Hub and that they are not touching.

If needed, loosen the Nut slightly.

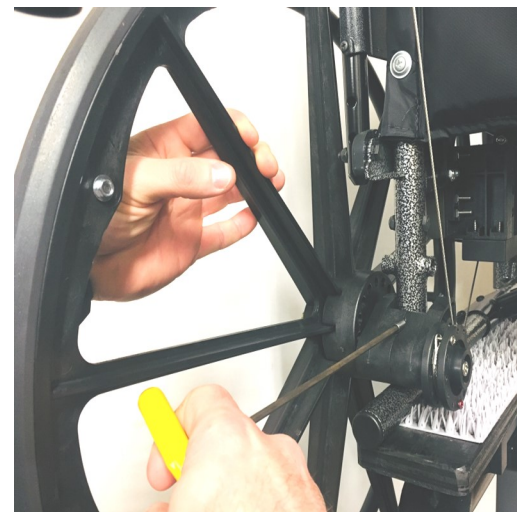


19. Ensure the Cam is not rocking on the frame by pushing & pulling the wheel.

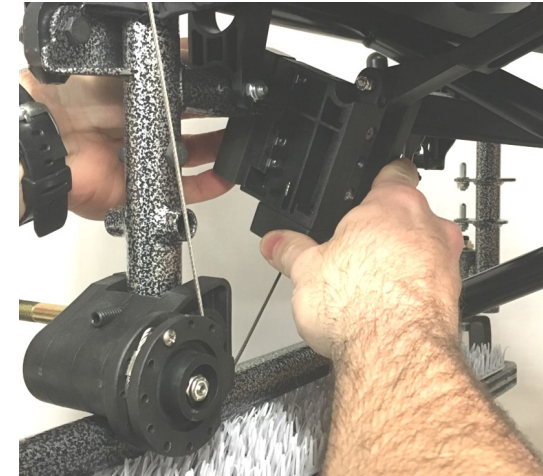
If the Cam is rocking, pull toward the rear until it has bottomed out.

Use the supplied 5/32 Allen Key and tighten the Set Screw until it is **just** touching the frame.

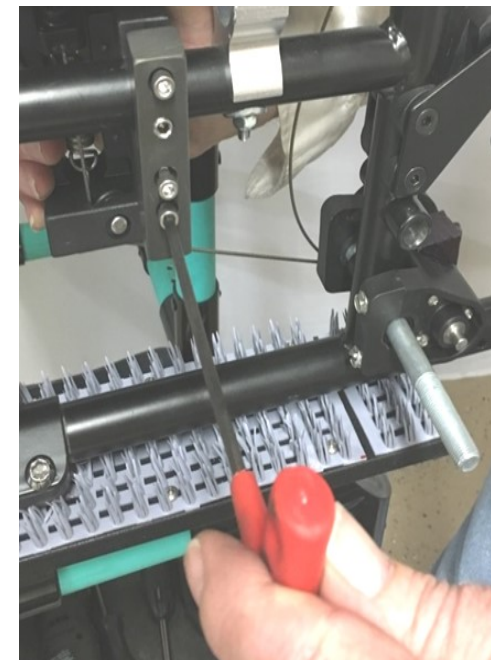
**DO NOT OVERTIGHTEN.** This will create torque in the Lock Housing and create alignment issues.



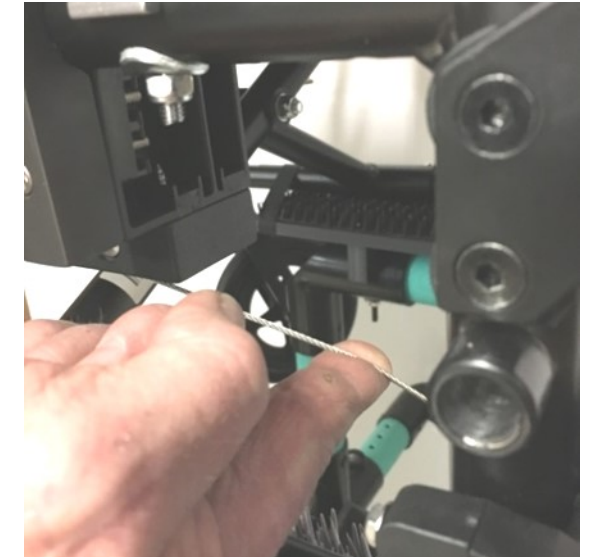
10. a) Remove the Paddle Clamp and place the Paddle Assembly onto the frame as shown.  
 b) Place the Clamp onto the Paddle Assembly.  
 c) Thread the three Mounting Screws equally into the Paddle Assembly but do not fully tighten.



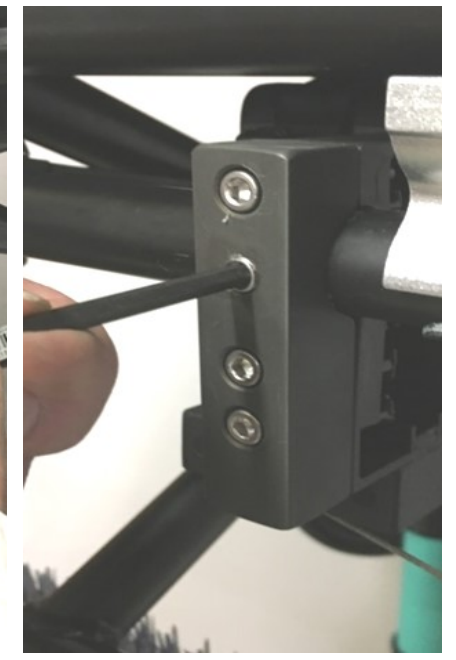
12. Hold the Paddle Assembly vertically level with about 1" of slack in the cable and tighten all three Mounting Screws.  
 Check that the Paddle Assembly is vertically level with the rear frame of the wheelchair.  
 a) Tap the bottom of the assembly if adjustments need to be made.



11. Slide the Paddle Assembly forward until you have about 1" slack in the cable



13. Once the Paddle Assembly is level with the proper cable tension:  
 a) Re-tighten all three Clamp Screws  
 b) Firmly tighten the Clamp Set Screw



 **Check Cable Tension:**

Hold the Lock Assembly Cam Wheel by hand and turn back until it stops- then release. This should make a snap or popping noise. If the Lock Pin pops as it should, reach up and press the Paddle down completely from the top of the seat. Watch the Cam Wheel as you are doing this to see if it is turning as far as it would by hand. If so, the cable tension should be correct.



If the noise is more of a “thud”, the Cable is too tight. Loosen the Mounting Screws on the Paddle Clamp just enough to bump the Assembly back slightly. (A little does a lot) Tighten screws and re-test.

14. With the hand rim facing up, lay the wheel down on a flat surface. Line up the slots on the Hubs with the wheel spokes and press firmly until the Hub is flush and centered with the bearings.

If needed, TAP the Hub onto the wheel with a Rubber Hammer. Make sure that the Hub is flush with the wheel and centered with the bearings.



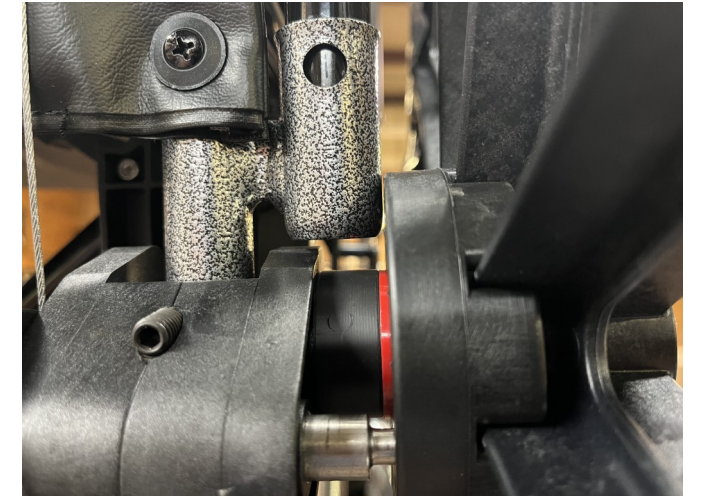
15. Open the Wheel Hardware Package (G or H) needed as determined from Section 2.1 on Page 3.

Slide on the Axle Spacer onto the Bolt followed by the Black Washer.



 **Hemi Height Installation**

The Red Washers will be needed for the Hubs to clear the arm attachments.



16. Slide the wheel onto the Bolt and turn until the Lock Pin falls into one of the holes on the Hub and the Hub is resting against the Black (or Red) Washer.

a) Add the Hubcap Retainer followed by the Nut.

