

Safe•t mate® SM2-2

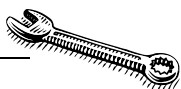
Advanced Wheelchair Anti-Rollback Device

INSTALLATION INSTRUCTIONS

An installation video is available at our website www.safetmate.com

MODELS

SM2-2	16"-20" chairs	SM2-2W	22"-24" wide chairs
SM2-2A	16"-20" w Optional Alarm	SM2-2WA	22"-24" w Optional Alarm



Before you begin!

Tools required:

- 3/8" open end wrench / socket
- 7/16" open end wrench / socket
- 1/4" open end or small adjustable wrench

PRECAUTIONS

Safe•t mate Model SM-008 or similar rear anti-tippers are recommended when using this device.

The Safe•t mate in not designed for use with a solid drop seat or solid seat insert.

If the tires on the wheelchair are hard or brittle due to age, it may degrade the performance of this device. In this case we recommend replacing the tires.

This device is not a replacement for the factory installed brakes. The Safe•t mate Wheelchair Anti-rollback Device is a back-up system which may reduce injuries when factory brakes are not used.

Not a substitute for proper supervision. Supervise fall risk patients closely.



CALL US FIRST !

For technical questions,
help with installation
or adjustments,
call our toll-free number:
800.210.2298

Outside the U.S.
860.445.0210

Monday-Friday
8am-4pm est.

Our highly trained customer
service staff is ready to
provide friendly assistance.

If parts become damaged or
missing during shipping,
notify us immediately and
replacement parts will usually
ship from our facility
on the same day.



Made in the U.S.A. by:
210 Innovations, LLC
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Groton, CT 06340
Tel. 860.445.0210
Fax 860.445.9999

www.safetmate.com

U.S. PATENTS
6,092,824
6,279,963
6,371,503



Authorized European Distributor
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Shelley Close, Lowmoor Road
Industrial Estate, Kirby-in-Ashfield
Nottinghamshire NG17 7ET, UK
Tel. 44 1623 759146
Fax 441623 726886

Lot No.

4 Digit number found on sticker
applied to left side of seat lever

Date Purchased:

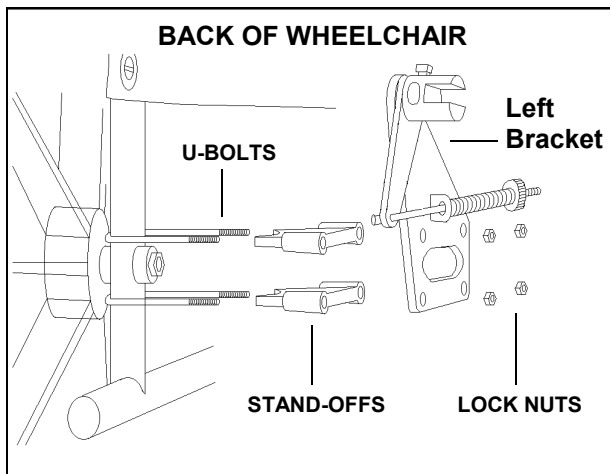
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Purchased From:

1. Install Mounting Brackets

The Left and Right Mounting Brackets and Brake Arms have been bundled together with the Center Lever Assembly during packaging using a white plastic cable tie. Cut the tie to release these components.

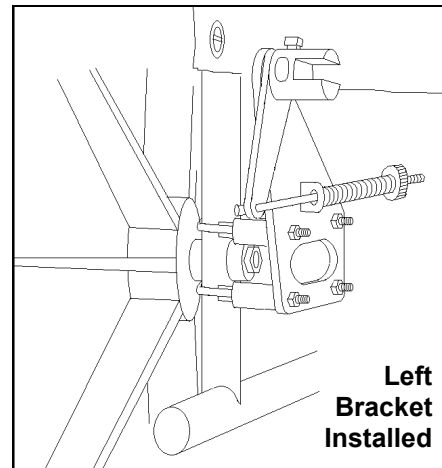
When mounting to an adjustable height wheelchair, mounting brackets must be installed at the axle in use.



Begin with left bracket. Locate left bracket, U-bolts (2 ea.), Stand-offs (2 ea.) and Lock nuts (4 ea.)

Install U-bolts around frame, as illustrated, with 1 U-bolt above axle and 1 below axle. Slide 1 stand-off onto each U-bolt as shown. Slide left bracket onto remaining portion of U-bolts. Install 4 lock nuts (3/8" wrench) and snug enough to hold bracket in position but still allow rotation of bracket on wheelchair frame for later brake arm alignment. (Step 4).

Repeat steps for right bracket.



2. Configure Seat Lever

There are 2 seat lever depth adjustments, **A** or **B** and 3 seat lever height adjustments, **1**, **2** or **3**.

Select Lever Depth Adjustment

Position A

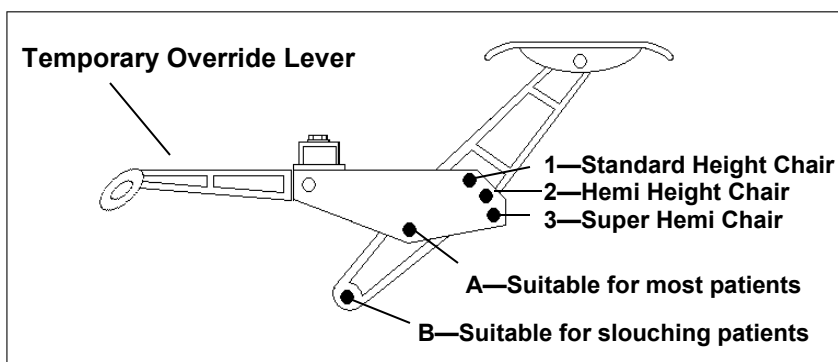
Floating seat pad is at back third of seat.
This position is suitable for most patients.

Position B

Seat pad is 2" further forward.
This position is better suited for patients who slouch or sit forward in the seat and will better depress the seat lever to disengage the brake arms.

Select Lever Height Adjustment 1, 2 or 3

This adjustment sets the lever height according to chair type. Refer to diagram.



Once the seat lever is configured, tighten both 1/4" nuts and bolts (7/16" wrench)

3. Install Seat Lever

Loosen the width adjusting bolts just enough to slide the width adjusting bars.

Locate the Quick-release pins (2 ea.).

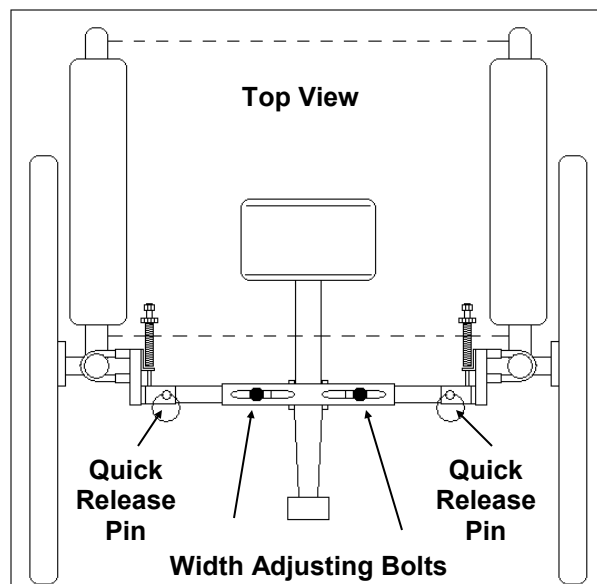
With the floating seat pad **beneath the sling seat**, slide the seat lever assembly into position as shown.

Align and insert the Quick-release pins from above.

Helpful Hint

Quick-release pins are meant to be a tight fit. If having difficulty inserting them, rock lever assembly back and forth.

Do not tighten the width adjusting bolts at this time.



4. Install Brake Arms and Align Mounting Brackets

There is a left and a right brake arm. When properly installed, machined flats face up as shown.

Begin with left side. Slide brake arm into pivoting collar as shown but do not tighten set screw.

The tire grabbing bend in arm needs to wrap around tire as illustrated.

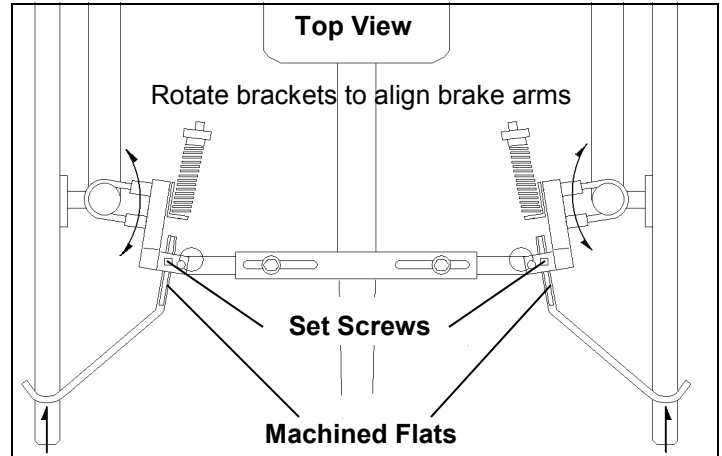
Hold left mounting bracket and rotate on chair frame as necessary to achieve proper brake arm alignment.

Do not use brake arm to rotate bracket.

Evenly tighten left mounting bracket nuts (4 ea.) (3/8" wrench).

Over-tightening of nuts will risk stripping threads.

Repeat procedure for right side.



5. Center the seat lever assembly (left to right) and securely tighten bolts (7/16" wrench)

6. Adjust Brake Arms

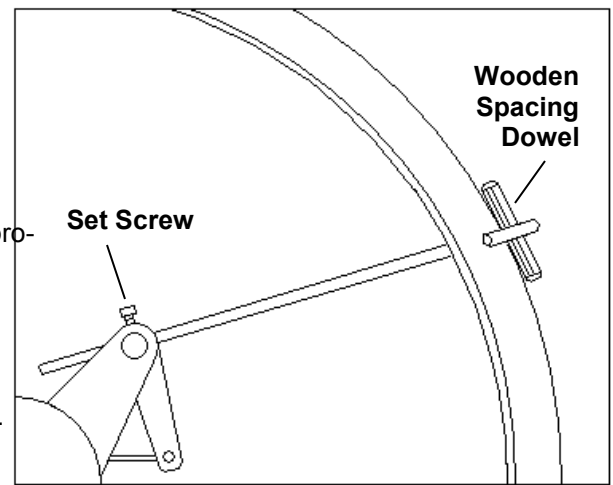


STEP 6 REQUIRES CHAIR SEAT TO BE OCCUPIED

Begin with left side. **With chair occupied**, place wooden spacing dowel provided between brake arm and tire as shown. Press firmly inward on brake arm so that dowel is held in place and firmly tighten left set screw (1/4" wrench). Repeat procedure for right side.

With chair occupied, check to make sure spacing between brake arms and tires is the same on both sides. Make fine adjustments if necessary.

Install brake arm protective end caps.



7. Adjust spring tension - Chair unoccupied

The pre-installed springs will work for most applications including the use of many seat cushions. If a cushion weighing 8 lbs or more will be used, remove the pre-installed springs and replace them with the **Heavy Seat Cushion Springs** supplied. Retain the original springs for future applications.

With Chair unoccupied and seat cushion (if used) in place, check the initial spring tension by standing in front of the wheelchair and exerting rearward force. *As a rule, the ideal spring tension is one that engages the anti-rollback device using the **least** amount of tension needed.*

If brake arms firmly grab and prevent rearward rotation of the tires, no more tension is needed.

If brake arms do not firmly grab the tires while pushing back on the chair, read cautions below before proceeding.



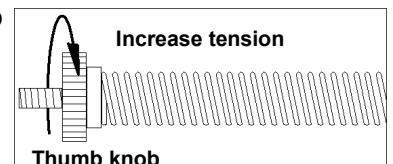
- Under no circumstances should pre-installed springs be fully compressed ("bottomed out") when seat is occupied. This will cause discomfort and excess stress on anti-rollback device components. If needed spring tension exceeds limits, install Heavy Seat Cushion Springs.

CAUTION

- Do not use Heavy Seat Cushion springs without a seat cushion. This will cause excessive pressure and discomfort. Always re-install original springs and repeat tension adjustment procedure when cushion is no longer needed in current application or device is transferred to a different chair.

Increase left and right side spring tension incrementally by counting equal number of thumb knob rotations until brake arms grab and prevent rearward rotation of tires.

Test device several times for consistent operation before returning wheelchair to service.

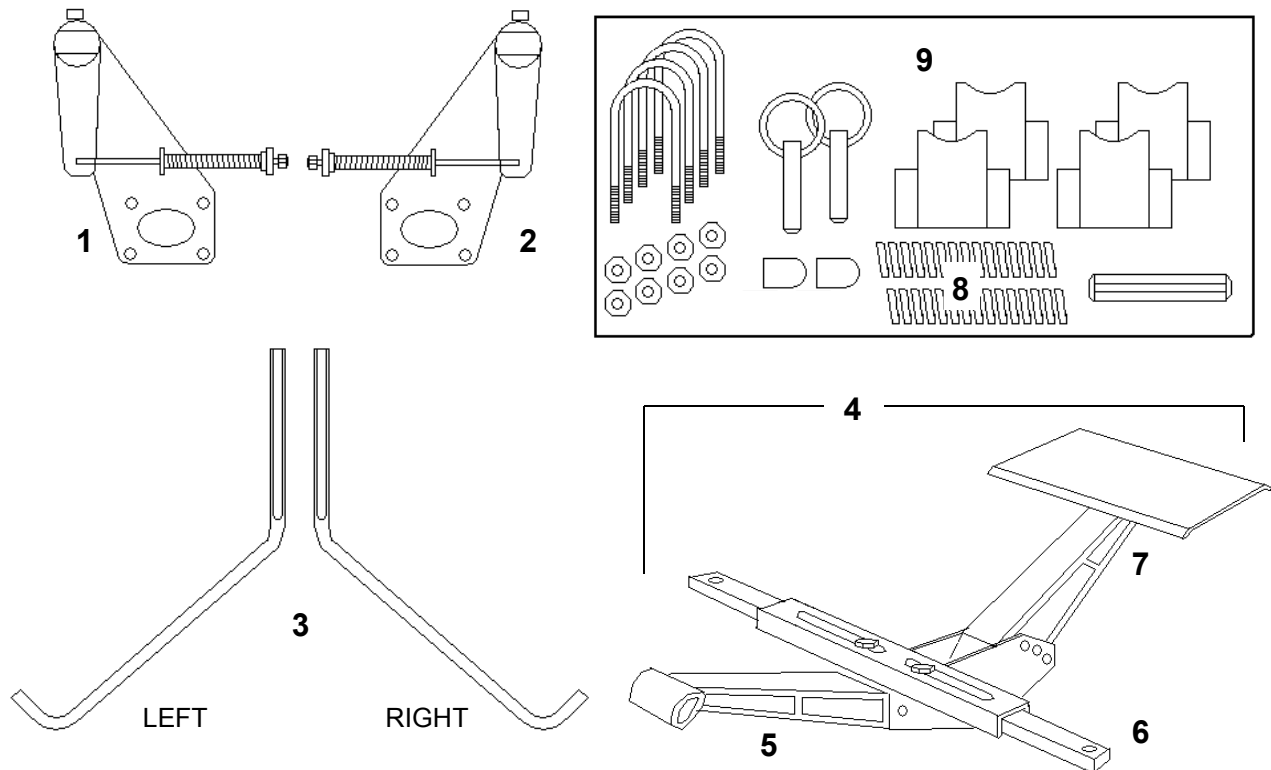


Temporary Override Lever Function and Use

The Temporary Override Lever is a removable caregiver feature that facilitates moving the unoccupied chair backward. It will temporarily disengage the anti-rollback device when manually lifted.

In an environment where patients are inclined to tamper with other patient equipment, it may be desirable to remove the Temporary Override Lever. Removal will not interfere with the anti-rollback function. With the Temporary Override Lever removed, the chair can be moved backward by depressing the seat lever pad.

SAFE•T MATE SM2-2 PARTS BREAKDOWN



REF.	PART NO.	DESCRIPTION
1	SM2-2BRKTL	Left mounting bracket assembly complete
2	SM2-2BRKTR	Right mounting bracket assembly complete
3	SM2BAS	Left / Right Brake Arm Set with Set Screws
4	SM2LEVASSEMB	Lever assembly complete (includes SM2TOL, SM2-2HS, SM2-2SLP)
5	SM2TOL	Temporary Override Lever
6	SM2-2HS SM2-2HSW	Width Adjusting Bars Width Adjusting Bars—Wide Model
7	SM2-2SLP	Seat Lever / Pad
8	SM2-2SCK	Heavy Seat Cushion Springs
9	SM2-2HWARE	4 U-bolts / 4 Stand-offs / 8 10-24 Lock Nuts / 2 Quick Release Pins / 2 End Caps / 1 Wooden Spacing dowel

STAFF TRAINING TIPS

The Safe•t mate wheelchair Anti-rollback Device is designed to prevent a wheelchair from rolling back and away from the user as he/she attempts to sit down in or stand up from the chair. The chair will still move forward when the unit is engaged.

To facilitate moving the unoccupied chair in reverse, pull up on the temporary override lever to release the brake arms from the tires. **Do not attempt to rig the override feature to permanently disengage the device as this may cause a patient fall and serious injury.** If override lever has been removed, reach down and press on wheelchair seat to release brake arms.

Whenever a new cushion is put into use, check for proper operation and readjust spring tension if required.

A wheelchair with the Safe•t mate Anti-rollback Device installed may be folded (for storage or transport) by removing the 2 quick-release pins that hold the center lever assembly in place. Be sure to retain the pins for reinstalling the lever assembly.

If the optional integrated alarm is in use, the alarm box should be removed prior to wheelchair washing. Once reinstalled, the alarm needs no further adjustment. However, it should be checked for proper operation.

The Anti-rollback Device should be inspected periodically to ensure that all the mounting hardware is securely tightened and that the brake arms are in proper adjustment. If the optional alarm is in use, it is preferable to have the battery changed on a frequent schedule.

Troubleshooting guide

ATTENTION

In addition to the below table, there is an installation video that may be helpful at our website www.safetmate.com

Condition	Possible Cause	Check/Remedy
Brake arms do not lift off tires with seat occupied.	Step 6 not performed with chair occupied . Mounting brackets at improper frame location.	Review installation instructions.
Only one brake arm grabs tire when patient rises from chair.	Mounting brackets at different heights on frame. Faulty brake arm adjustment procedure.	Re-align mounting brackets. Repeat step 6
Brake arms rotate out of position or loosen.	Loose set screws or left and right brake arms swapped.	Ensure machined flat surfaces face up, readjust and FIRMLY tighten set screws. Thread locking compound may be applied if needed.
Quick release pins difficult to remove.	Quick release pins intended to be tight to prevent tampering or accidental removal.	When removing, gently rotate lever assembly to relieve tension on pins.
Optional Alarm		
Horn volume is low or does not sound	Low / dead battery. Faulty switch	Replace 9 volt battery. If alarm box is functioning correctly and switch and magnet are aligned but alarm does not sound, contact us for replacement switch
Horn sounds intermittently	Switch improperly aligned with magnet.	Perform switch alignment procedure

Warranty

The SM2-2, SM2-2A, SM2-2W and SM2-2WA are warranted to be free from defects in material and workmanship under normal operating conditions for a period of **one year**. 210 Innovations sole obligation under this warranty is limited to repair or replacement of defective parts. This warranty does not cover failure due to abuse, misuse, alteration, improper assembly or installation. Please contact us at **800-210-2298 or www.safetmate.com**