



## Zippie® Zone®

- ☐ with transit option      ☐ without transit option

**Supplier:** This manual must be given to the rider of this wheelchair.

**Rider:** Before using this wheelchair read this entire manual and save for future reference.

Owner's Manual

## Zippie® Zone®

- ☐ con opción de tránsito      ☐ sin opción de tránsito

**Distribuidor:** Este manual debe ser entregado al pasajero de esta silla de ruedas.

**Pasajero:** Antes de usar esta silla de ruedas, lea este manual en su totalidad y guárdelo para futura referencia.

Manual de  
Instrucciones

Cada una de las sillas se envía con un manual de instrucciones en inglés. El manual en español y francés está disponible en formato PDF en nuestra página en Internet: [www.SunriseMedical.com](http://www.SunriseMedical.com). Ingrese a la página del producto específico para descargar el manual, o comuníquese con el proveedor autorizado de Sunrise Medical.

## Zippie® Zone®

- ☐ avec option pour transport      ☐ sans option pour transport

**Au Fournisseur:** Ce manuel doit être remis à l'utilisateur de ce fauteuil roulant.

**À l'Usager:** Veuillez lire tout le manuel et le conserver pour référence ultérieure.

Manuel  
d'instructions

Chaque fauteuil est livré avec un manuel d'instructions en anglais. Les versions en espagnol et en français sont à votre disposition en format PDF sur le site : [www.SunriseMedical.com](http://www.SunriseMedical.com). Veuillez vous rendre à la page de votre produit pour télécharger le manuel dans la langue souhaitée, ou contactez un fournisseur agréé Sunrise Medical.

P/N 116100 Rev. F



**SUNRISE MEDICAL® LISTENS**

Thank you for choosing a Zippie® wheelchair. We want to hear your questions or comments about this manual, the safety and reliability of your chair, and the service you receive from your Sunrise Medical authorized dealer. Please feel free to write or call us at the address and telephone number below:

**SUNRISE MEDICAL (US) LLC**

Customer Service Department  
12002 Volunteer Blvd.  
Mount Juliet, TN 37122, USA  
Tel: 1-800-333-4000

Please register your wheelchair and let us know if you change your address. This will allow us to keep you up to date with information about safety, new products, and options to increase your use and enjoyment of this wheelchair.

You can also register your wheelchair at:  
[www.SunriseMedical.com/register](http://www.SunriseMedical.com/register)

**FOR ANSWERS TO YOUR QUESTIONS**

Your authorized dealer knows your wheelchair best and can answer most of your questions about chair safety, use, and maintenance.

For future reference, please fill in the following:

Dealer: \_\_\_\_\_

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

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

Serial #: \_\_\_\_\_ Date/Purchased: \_\_\_\_\_

**ADDITIONAL INFORMATION YOU SHOULD KNOW**

No component of this chair was made with Natural Rubber Latex.

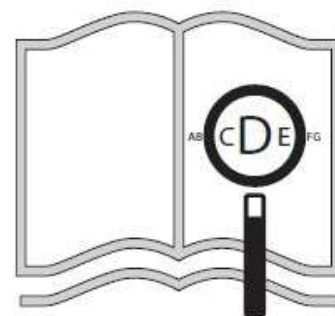
**DISPOSAL AND RECYCLING INFORMATION**

When this product reaches the end of its life, please take it to an approved collection or recycling point designated by your local or state government. This product is manufactured using a variety of materials. Your product should not be disposed of as ordinary household waste. You should dispose of your product properly, according to local laws and regulations. Most materials that are used in the construction of this product are fully recyclable. The separate collection and recycling of your product at the time of disposal will help conserve natural resources and ensure that it is disposed in a manner that protects the environment.

Ensure you are the legal owner of the product prior to arranging for the product disposal in accordance with the above recommendations.



[www.SunriseMedical.com/register](http://www.SunriseMedical.com/register)



If you are visually impaired,  
this document can be viewed  
in PDF format at

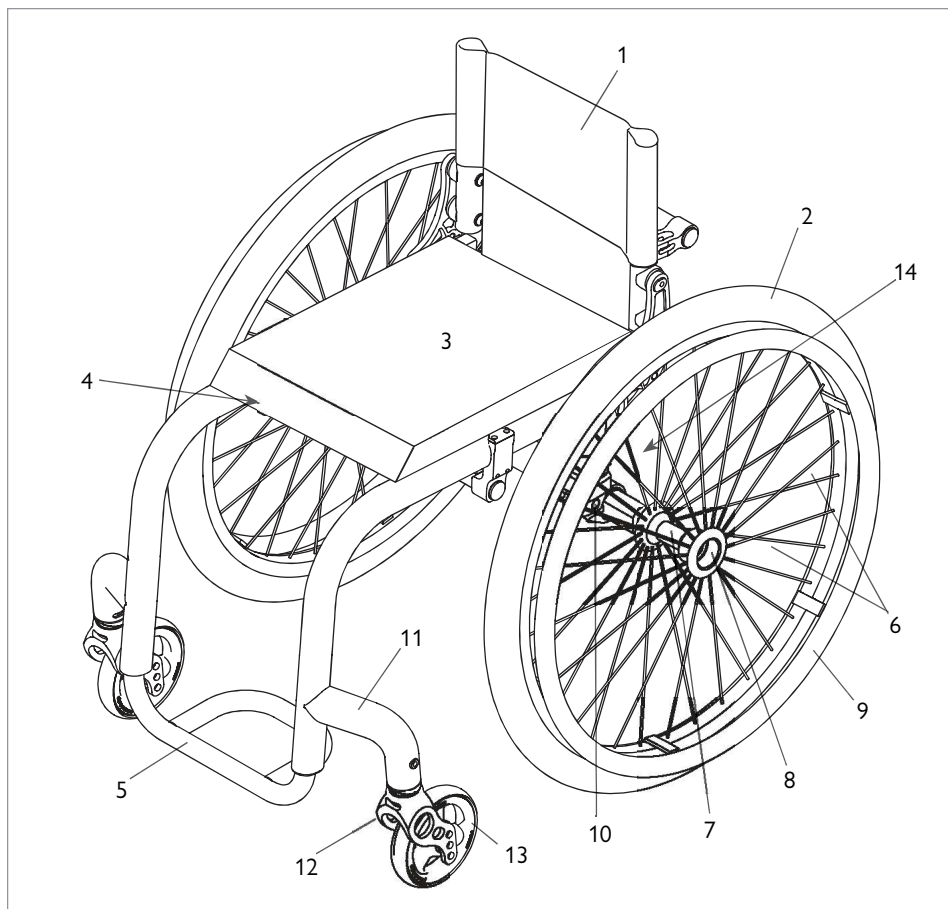
**[www.SunriseMedical.com](http://www.SunriseMedical.com)**



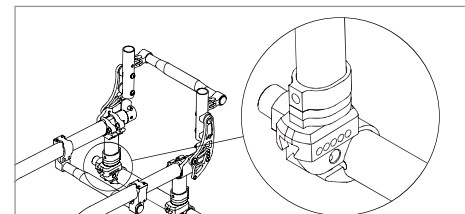
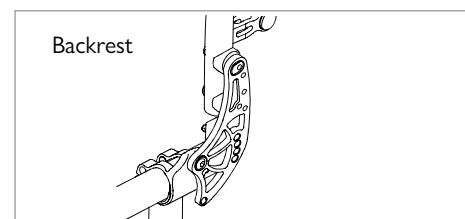
## II. TABLE OF CONTENTS

I. INTRODUCTION.....	2	G. Pneumatic Tires.....	13
II. TABLE OF CONTENTS.....	3	H. Positioning Belts (Optional).....	13
III. YOUR CHAIR AND ITS PARTS.....	4	I. Power Drive (Optional).....	13
IV NOTICE - READ BEFORE USE.....	4	J. Push Handles (Optional).....	13
A. Choose The Right Chair & Safety Options.....	4	K. Quick-Release Axles.....	14
B. Review This Manual Often.....	4	L. Rear Wheel.....	14
C. Warnings.....	4	M. Rear Wheel Locks (Optional).....	14
V. GENERAL WARNINGS.....	5	N. Modified Seat Systems.....	14
A. Weight Limit.....	5	O. Transit Option.....	14
B. Intended Use.....	5	P. Upholstery Fabric.....	14
C. Attendants And Caregivers.....	5	Q. Backrest Tension Adjustable.....	15
D. Accessories.....	5	R. Folding Lock Down Angle Adjustable Backrest.....	15
E. Know Your Chair.....	5	S. Seat Back.....	15
F. Reduce The Risk Of An Accident.....	5	T. Anti-Tip Receivers.....	15
G. Safety Checklist.....	5	VIII. USE AND MAINTENANCE.....	16
H. Changes & Adjustments.....	5	A. Introduction.....	16
I. Environmental Conditions.....	6	B. Critical Safety Checks.....	16
J. Terrain.....	6	C. Cleaning.....	16
K. Street Use.....	6	D. Safety Checklist.....	16
L. Motor Vehicle Safety.....	6	E. Troubleshooting Chart.....	16
M. When You Need Help.....	7	F. To Mount And Remove Rear Wheels.....	17
N. Choking Hazard.....	7	G. Wheel Locks.....	17
O. Pinch Point.....	7	H. Hub Lock.....	17
P. Sharp Edges.....	7	I. Sideguard Mount.....	17
Q. Latex Allergies.....	7	J. Anti-Tips.....	18
VI. SAFETY WARNINGS: FALLS & TIP-OVERS.....	8	K. Single Post Height-Adjustable Armrests (Optional).....	18
A. Center Of Balance.....	8	L. Padded Swing-Away Armrests (Optional).....	18
B. Dressing Or Changing Clothes.....	8	M. Depth Adjustable Backrest.....	19
C. Obstacles.....	8	N. Tension Adjustable Seat Sling Adjustment.....	19
D. Front Caster Lift.....	8	O. Backrest Tension Adjustable.....	20
E. Reaching Or Leaning.....	8	P. Back Angle Adjustment.....	20
F. Moving Backward.....	9	Q. Cushion Installation.....	21
G. Escalators.....	9	R. Storage Tips.....	21
H. Ramps, Slopes & Sidehills.....	9	S. Inspect.....	21
I. Transfers.....	10	IX. DEALER SERVICE & ADJUSTMENT.....	22
J. Curbs & Single Steps.....	10	A. Dealer Service Introduction.....	22
K. Climbing A Curb Or Single Step.....	11	B. Critical Maintenance Tips.....	22
L. Descending A Curb Or Single Step.....	11	C. Cleaning.....	22
M. Stairs.....	11	D. Rear Axle.....	22
N. Climbing Stairs.....	11	E. Rear Wheel Axle Nut Adjustment.....	23
O. Descending Stairs.....	11	F. Rear Wheel Spacing.....	24
VII. WARNINGS: COMPONENTS AND OPTIONS.....	12	G. Casters.....	24
A. Anti-Tip Tubes.....	12	H. Caster Forks.....	25
B. Armrests.....	12	I. Adjusting Rear Seat Height.....	25
C. Cushions & Sling Seats.....	12	J. Wheel Locks.....	25
D. Fasteners.....	12	K. Armrest Receiver Attachment.....	26
E. Footrests.....	12	L. Footrest Height Adjustment.....	26
F. Offset Seating (Optional).....	12	X. SUNRISE LIMITED WARRANTY.....	27

### III. YOUR CHAIR AND ITS PARTS



- |                           |                             |
|---------------------------|-----------------------------|
| 1. Backrest               | 8. Quick-release axle       |
| 2. Tire                   | 9. Handrim                  |
| 3. Seat cushion           | 10. Axle plate              |
| 4. Seat sling (not shown) | 11. Caster housing          |
| 5. Footrest               | 12. Fork                    |
| 6. Spokes                 | 13. Caster Wheel            |
| 7. Rear wheel hub         | 14. Camber tube (not shown) |



NOTE: All features may not be available with some device setups or in conjunction with other device features. Please consult your Sunrise Medical authorized dealer for more information. Your authorized dealer can also provide you with information on accessories.

### IV NOTICE - READ BEFORE USE

#### A. CHOOSE THE RIGHT CHAIR & SAFETY OPTIONS

Sunrise provides a choice of many wheelchair styles to meet the needs of the wheelchair rider. However, final selection of the type of wheelchair, options and adjustments rests solely with you and your health care advisor. Choosing the best chair and set-up for your safety depends on such things as:

1. Your disability, strength, balance and coordination.
2. The types of hazards you must overcome in daily use (where you live and work, and other places you are likely to use your chair).
3. The need for options for your safety and comfort (such as anti-tip tubes, positioning belts, or special seating systems).

#### B. REVIEW THIS MANUAL OFTEN

Before using this chair you, and each person who may assist you, should read this entire manual and ensure you follow all instructions. Review the warnings often, until they are second nature to you.

#### C. WARNINGS

The word "WARNING" refers to a hazard or unsafe practice that may cause severe injury or death to you or to other persons. The "Warnings" are in three main sections, as follows:

##### V - GENERAL WARNINGS

Here you will find a safety checklist and a summary of risks you need to be aware of before you ride this chair.

##### VI - SAFETY WARNINGS: FALLS & TIP-OVERS

Here you will learn about practices for the safe use of your chair, and how to avoid a fall or tip-over while you perform daily activities in your chair.

##### VII - WARNINGS — COMPONENTS & OPTIONS

Here you will learn about the components of your chair and options you can select for safety. Consult your Sunrise Medical authorized dealer and your health care provider to help you choose the best set-up and options for safe use.

NOTE - Where they apply, you will also find "Warnings" in other sections of this manual. Heed all warnings in these sections. If you fail to do so a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

## V. GENERAL WARNINGS

### A. WEIGHT LIMIT

#### WARNING

NEVER exceed the weight limit specified by Sunrise Medical. The weight capacity provided by your manufacturer is for the combined weight of a rider and items carried using on-board storage. If you do exceed the weight limit, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

User Weight Capacity:

Zippie® Zone® - 165 lbs (75kg)

### B. INTENDED USE

The Zippie Zone wheelchair's intended use is to provide mobility to persons limited to a sitting position.

#### WARNING

DO NOT use this device for purposes other than what is intended by the manufacturer.

1. The wheelchair is not designed for weight training and is unsafe for use as a seat while weight training. Weight training from the wheelchair substantially changes the stability of the chair and may cause tipping.
2. DO NOT stand on the frame of the wheelchair.
3. NEVER allow someone to stand on your chair or use it as a step ladder.
4. This chair is designed for a single rider only.
5. Unauthorized modifications and use of parts or accessories not supplied or approved by Sunrise Medical may change the chair structure. This will void the warranty and may cause a safety hazard. If the warning is ignored, damage to your chair, and the potential for severe injury of the person using the chair for unintended purposes can occur.

### C. ATTENDANTS AND CAREGIVERS

#### WARNING

Before you assist a rider, be sure to read all warnings contained in this manual, and follow all instructions that apply. Be aware that after consulting a health care provider, you will need to learn safe and proven body mechanics to use and create assistive methods best suited to your abilities.

### D. ACCESSORIES

#### WARNING

Unauthorized modifications or use of parts or accessories not supplied or approved by Sunrise Medical may change the chair structure. This will void the warranty and may cause a safety hazard.

Some problems that may occur, but are not limited to:

1. Incorrect wheels and/or tires that put the rider at risk of a fall or tip-over.
2. Adding a component to the frame, changing the structural integrity of the chair.
3. Any modification or disassembly can potentially create an unsafe situation where rider and/or attendant are put at risk.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### E. KNOW YOUR CHAIR

#### WARNING

Every wheelchair is different. Take the time to learn the feel of this chair before you begin riding. Start slowly, with easy, smooth strokes. If you are used to a different chair, you may use too much force and tip over. If you use too much force, damage to your chair, a fall, tip-over or loss of control may occur and cause severe injury to the rider or others.

### F. REDUCE THE RISK OF AN ACCIDENT

#### WARNING

1. BEFORE you begin riding, you should be trained in the safe use of this chair by your health care provider.
2. Practice bending, reaching, and transfers until you know the limit of your ability. Have someone help you until you know what can cause a fall or tip-over and how to avoid doing so.
3. Be aware that you must develop your own methods for safe use best suited to your level of function and ability.
4. NEVER try a new maneuver on your own. Ask the advice of your health care provider to lower the risk of a fall or tip over.
5. Get to know the areas where you plan to use your chair. Look for hazards and learn how to avoid them.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### G. SAFETY CHECKLIST

#### WARNING

Before Each Use Of Your Chair:

1. Make sure the chair rolls easily and that all parts work smoothly. Check for noise, vibration, or a change in ease of use. (This may indicate low tire pressure, loose fasteners, or damage to your chair).
2. Inspect any problem. Your Sunrise Medical authorized dealer can help you find and correct the problem.
3. Check to see that both quick-release rear axles are locked. When locked, the axle button will "pop out" fully. If not locked, the wheel may come off and cause you to fall.
4. If your chair has anti-tip tubes, lock them in place.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### H. CHANGES & ADJUSTMENTS

#### WARNING

1. If you modify or adjust this chair, it may increase the risk of a tip-over UNLESS you make other adjustments as well.
2. Consult your Sunrise Medical authorized dealer BEFORE you modify or adjust your chair.
3. We recommend that you use anti-tip tubes until you adapt to the change, and are sure you are not at risk to tip over.
4. Unauthorized modifications by the end-user, dealer, or any other individual, including the use of parts not supplied or approved by Sunrise Medical, may change the chair structure. This will void the warranty and may cause a safety hazard.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.



**I. ENVIRONMENTAL CONDITIONS****WARNING**

1. Use extra care if you must ride your chair on a wet or slick surface. If you are in doubt, ask for help.
2. Contact with water or excess moisture may cause your chair to rust or corrode. Avoid all extreme weather situations if possible.
  - a. Do not use your chair in a shower, pool, or other body of water. The chair tubing and parts are not water-tight and may rust or corrode from the inside.
  - b. Avoid excess moisture. For example, do not leave your chair in a damp bathroom while taking a shower.
  - c. Dry your chair as soon as you can if it gets wet, or if you use water to clean it.
  - d. Avoid contact with salt or salty conditions as this may cause damage to the chair.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

**J. TERRAIN****! WARNING**

1. Based on ANSI/RESNA testing, Sunrise Medical recommends the use of a caster wheel with a minimum diameter of 5-in (127mm), if the wheelchair will be overcoming obstacles up to 1/2-in (12.7mm) on a regular basis.
2. Your chair is designed for use on firm, even surfaces such as concrete, asphalt, indoor flooring, and carpets.
3. Do not operate your chair in sand, loose soil, or over rocky terrain.
4. If you use your chair on terrain that is rougher than described above there is a danger that screws and bolts will loosen prematurely, and that damage to wheels or axles could put the rider at risk of a fall, tip-over, or loss of control.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

**K. STREET USE****! WARNING**

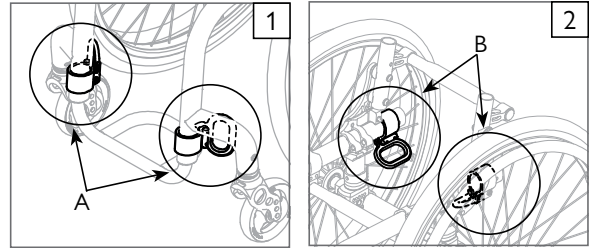
1. This product is not intended for street use.
2. Avoid streets whenever possible.
3. Obey and follow all legal pedestrian pathways, and laws that apply to pedestrians.
4. Be alert to the danger of motor vehicles in parking lots, or if you must cross a road.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

**L. MOTOR VEHICLE SAFETY** 1 2

If possible and feasible, the rider should transfer to the Original Equipment Manufacturer vehicle seat and use the OEM vehicle restraint. Sunrise Medical does provide a WC-19 Wheelchair Tie-Down and Occupant Restraint System, otherwise called a Transit Option. To identify whether your wheelchair has been manufactured with the Transit Option installed, look for four points of securement: two front points (A), and two rear points (B). These points are recognized by the securement point decal which can be found on or near the securement points.

If your wheelchair is equipped with the Transit Option, please review the Transit Securement supplement that was provided with the wheelchair for additional information and instructions. You can request a copy from your Sunrise Medical authorized dealer, or call Sunrise Medical at 1-800-333-4000 if you do not have it.

**Front Transit Hook****Rear Transit Hook**

Look for this symbol on your wheelchair. It indicates wheelchair securement points which conform to ANSI/RESNA (1998) V.1 - Section 19 and/or ANSI/RESNA (2012) V.4 WC-19. For more Transit related information, see the "Transit Securement Supplement" included with your chair.

**! WARNING**

If your chair is **NOT** equipped with the Transit Option:

1. NEVER let anyone sit in this chair while in a moving vehicle.
  - a. ALWAYS move the rider to an approved vehicle seat.
  - b. ALWAYS secure the rider with proper motor vehicle restraints.
2. In an accident or sudden stop the rider may be thrown from the chair. Wheelchair seat belts will not prevent this, and further injury may result from the belts or straps.
3. NEVER transport this chair in the front seat of a vehicle. It may shift and interfere with the driver.
4. ALWAYS secure this chair so that it cannot roll or shift.
5. DO NOT use any wheelchair that has been involved in a motor vehicle accident. A sudden stop and/or collision may structurally damage your wheelchair. There may have been a change to the structure of the chair, and/or damaged or broken some of the components. Wheelchairs involved in sudden stops should be inspected for possible failures in frame and/or components. Frame damage may be represented by but not limited to: visual cracks, dents, metal distortion, bends, or damage to the seating mounting. If the chair no longer drives straight, it could be damaged. If the wheelchair has been involved in an accident, discontinue use immediately and contact your Sunrise Medical authorized dealer for a thorough inspection. If damage is questionable or if there is concern regarding the condition of the chair, Sunrise Medical recommends replacement of the chair.
6. Wheelchairs involved in collisions should be replaced.  
NOTE- The warranty is void on any wheelchair that is involved in a collision.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

## V. GENERAL WARNINGS

### M. WHEN YOU NEED HELP

#### WARNING

**For The Rider:** Ensure that each person who helps you reads and follows all warnings and instructions that apply.

**For Attendants:**

1. Work with the rider's doctor, nurse, or therapist to learn safe methods best suited to your abilities and those of the rider.
2. Tell the rider what you plan to do, and explain what you expect the rider to do. This will put the rider at ease and reduce the risk of an accident.
3. Make sure the chair has push handles. They provide secure points for you to hold the rear of the chair to prevent a fall or tip-over. Check to make sure push handle grips will not rotate or slip off.
4. To prevent injury to your back, use good posture and proper body mechanics. When you lift or support the rider or tilt the chair, bend your knees slightly and keep your back as upright and straight as you can.
5. Remind the rider to lean back when you tilt the chair backward.
6. When you descend a curb or single step, slowly lower the chair in one easy movement. Do not let the chair drop the last few inches to the ground. This may damage the chair or injure the rider.
7. To avoid tripping, unlock and rotate anti-tip tubes up, out of the way.
8. Whenever you aren't attending the wheelchair, ALWAYS use the wheel-lock to secure the rear wheels, and lock the anti-tip tubes in place.

If you fail to ask for help when in doubt, you run a high risk of a fall, tip-over, or loss of control that may occur and cause severe injury to the rider or others.

### N. CHOKING HAZARD

#### WARNING

**NOTE-** Your chair consists of many small parts that could present a choking or swallowing hazard to young children. Take care to keep loose parts out of reach when doing any work on the chair.

### O. PINCH POINT

#### WARNING

**NOTE-** Your wheelchair has many moving parts that can create pinch points and possible finger traps. Be aware when making any adjustments, when folding and unfolding, when moving, and any other situation that could cause a pinch point situation.

### P. SHARP EDGES

#### WARNING

**NOTE-** This wheelchair contains parts and hardware of many shapes and sizes. When using or working around the wheelchair, take caution to avoid any corners or edges that may cause a scrape or a cut.

### Q. LATEX ALLERGIES

#### WARNING

For riders with latex allergies, we recommend the use of solid tires as there is a risk of latex contamination during the manufacturing process for pneumatic tires and inner tubes.

## VI. SAFETY WARNINGS: FALLS & TIP-OVERS

### A. CENTER OF BALANCE

#### WARNING

The point where this chair will tip forward, back or to the side depends on its center of balance and stability. How your chair is set up, the options you select, and the changes you make may affect the risk of a fall or tip-over.

1. The Most Important Adjustment Is:  
The position of the rear wheels. The more you move the rear wheels forward, the more likely your chair will tip over backward.
2. The Center Of Balance Is Also Affected By:
  - a. A change in the set-up of your chair, including:
    - The distance between the rear wheels.
    - The amount of rear wheel camber.
    - The seat height and seat angle.
    - Backrest angle.
  - b. A change in your body position, posture, or weight distribution.
  - c. Riding your chair on a ramp or slope.
  - d. A backpack or other options and the amount of added weight.
3. To Reduce The Risk Of An Accident:
  - a. Consult your doctor, nurse, or therapist to find out what axle and caster position is best for you.
  - b. Consult your Sunrise Medical authorized dealer BEFORE you modify or adjust this chair. Be aware that you may need to make other changes to correct the center of balance.
  - c. Have someone help you until you know the balance points of your chair and how to avoid a tip-over.
  - d. Use anti-tip tubes.

If you fail to heed these warnings, you are at a high risk of a fall, tip-over, or loss of control that could cause severe injury to the rider or others.

### B. DRESSING OR CHANGING CLOTHES

#### WARNING

Your child's weight may shift if they dress or change clothes while seated in this chair.

To reduce the risk of a fall or tip-over:

1. Rotate the front casters until they are as far forward as possible.  
This makes the chair more stable.
2. Lock anti-tip tubes in place. (If your chair does not have anti-tip tubes, back it up against a wall and lock both rear wheels).

If you fail to heed these warnings, you are at a high risk of a fall, tip-over, or loss of control that could cause severe injury to the rider or others.

### C. OBSTACLES

#### WARNING

Riding over curbs or obstacles can cause tipping and serious bodily harm. If you have any doubt that you can safely cross any curb or obstacle, ALWAYS ASK FOR HELP. Be aware of your riding skills and personal limitations. Develop new skills only with the help of a companion.

To avoid the risk of traversing obstacles:

1. Keep a lookout for danger – scan the area well ahead of your chair as you ride.
2. Ensure the floor areas where you live and work are level and free of obstructions.
3. Remove or cover threshold strips between rooms.
4. Install a ramp at entry or exit doors. Ensure there is not a drop off at the bottom of the ramp.

5. To Help Correct Your Center Of Balance:
  - a. Lean your upper body FORWARD slightly as you go UP over an obstacle.
  - b. Press your upper body BACKWARD as you go DOWN from a higher to a lower level.
6. If your chair has anti-tip tubes, do not go over an obstacle without help.
7. Keep both of your hands on the handrims as you go over an obstacle.
8. Never push or pull on an object (such as furniture or a doorjamb) to propel your chair.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### D. FRONT CASTER LIFT

#### WARNING

Front caster lift can occur when the front wheels, ordinarily in contact with the ground, are either intentionally, or unintentionally caused to lift from the ground while the rear wheels remain in contact. Pitch control (partial or full) should NEVER be attempted without consulting your health care adviser and making sure that anti-tips are installed.

If you fail to heed this warning, you are at a high risk of damage to your chair, a fall, tip-over, or loss of control that may occur and cause severe injury to the rider or others.

### E. REACHING OR LEANING

#### WARNING

If you reach or lean it will affect the center of balance of the chair. This may cause you to fall or tip over. When in doubt, ask for help or use a device to extend their reach.

1. NEVER reach or lean if you must shift your weight sideways or rise up off the seat.
2. NEVER reach or lean if you must move forward in your seat to do so. Always keep your buttocks in contact with the backrest.
3. NEVER reach with both hands (you may not be able to catch yourself to prevent a fall if the chair tips).
4. NEVER reach or lean to the rear unless your chair has anti-tip tubes locked in place.
5. DO NOT reach or lean over the top of the seat back. This may damage one or both backrest tubes and cause you to fall.
6. If You Must Reach Or Lean:
  - a. Do not lock the rear wheels. This creates a tip point and makes a fall or tip-over more likely.
  - b. Do not put pressure on the footrests.
  - c. Move your chair as close as you can to the object you wish to reach.
  - d. Do not try to pick up an object from the floor by reaching down between your knees. You are less likely to tip if you reach to the side of your chair.
  - e. Rotate the front casters until they are as far forward as possible. This makes the chair more stable.
  - f. Firmly grasp a rear wheel or an armrest with one hand. This will help to prevent a fall if the chair tips.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.



## VI. SAFETY WARNINGS: FALLS & TIP-OVERS

### F. MOVING BACKWARD

#### WARNING

Use extra care when you move your chair backward. Your chair is most stable when you propel yourself forward. You may lose control or tip over if one of the rear wheels hits an object and stops rolling.

1. Propel your chair slowly and smoothly.
2. If your chair has anti-tip tubes, make sure to lock them in place.
3. Stop often and check to ensure your path is clear.

If you fail to heed this warning, you are at a high risk of damage to your chair, a fall, tip-over, or loss of control that may occur and cause severe injury to the rider or others.

### G. ESCALATORS

#### WARNING

NEVER use this chair on an escalator, even with an attendant. If you do, a fall or tip-over is likely.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### H. RAMPS, SLOPES & SIDEHILLS 3 4 5 6

#### WARNING

Whenever possible, avoid riding on a slope, which includes a ramp or sidehill. This will change the center of balance of your chair. Your chair is less stable and more difficult to maneuver when it is at an angle. When moving up a hill, anti-tip tubes may not prevent a fall or tip-over.

1. **DO NOT** use your chair on a slope steeper than 6°.
2. **ALWAYS** go as straight up and as straight down as you can. (Do not “cut the corner” on a slope or ramp.)
3. **DO NOT** turn or change direction on a slope.
4. When you have to use a ramp, always stay in the CENTER of the ramp. Ensure the ramp is wide enough that you have no risk of going off the edge.
5. **DO NOT** stop on a steep slope. If you stop, you may lose control of your chair.
6. **NEVER** use rear wheel locks to try to slow or stop your chair. This is likely to cause your chair to veer out of control.
7. **ALWAYS** be aware of:
  - a. Wet or slippery surfaces.
  - b. A change in grade on a slope (or a lip, bump, or depression). These may cause a fall or tip-over.
  - c. A drop-off at the bottom of a slope or ramp. A drop-off as small as 3/4 inch (19mm) can stop a front caster and cause the chair to tip forward.
8. To Reduce The Risk Of A Fall Or Tip-Over:
  - a. Lean or press your body UPHILL. This will help adjust for the change in the center of balance caused by the slope or sidehill.
  - b. Keep pressure on the handrims to control your speed on a down slope. If you go too fast you may lose control.
  - c. **ASK FOR HELP** any time you are in doubt.
9. Ramps At Home & Work– For your safety, ramps at home and work must meet all legal requirements for your area:
  - a. **AVOID A DROP-OFF:** Ensure there is a section at the top or bottom to smooth out the transition.
  - b. **ALWAYS** stay in the center of the ramp and control your speed.

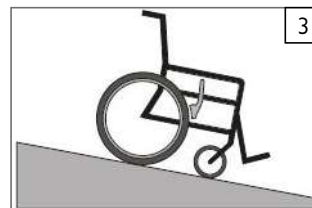
If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and can possibly cause severe injury to the rider or others.

#### For Attendants:

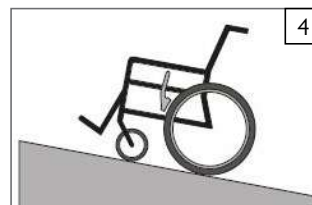
Follow these steps to help the rider go up or down a ramp:

1. Stay behind the chair.
2. Firmly grasp the push handles.
3. For going up or down a ramp, the chair should always be facing forward.

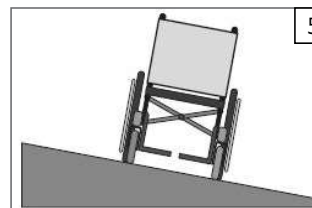
If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.



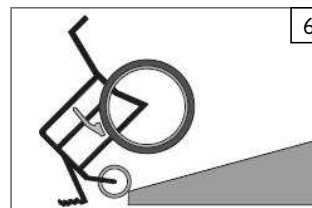
- IF** you need to go down a hill:
- a. The Downslope should be less than 6°.
  - b. **GO SLOW Control your speed.**
  - c. **ALWAYS** Go Straight down.
  - d. **NEVER** turn on a hill.
  - e. **ALWAYS** lean backward.



- IF** you need to go up a hill:
- a. The Upslope should be less than 6°.
  - b. **ALWAYS** Go Straight up.
  - c. **DON'T STOP.**
  - d. **NEVER** turn on a hill.
  - e. **ALWAYS** lean forward.



- IF** you need to traverse a Sidehill:
- a. Sidehill must be less than 6° or you are risking a tip over.
  - b. **DON'T STOP.**
  - c. **NEVER** turn on a hill.



- IF** you need to traverse a Ramp:
- a. Go Slowly.
  - b. Watch out for Drop-offs.
  - c. **ALWAYS** Go Straight Up or Straight Down.
  - d. Stay centered on the Ramp.

I. TRANSFERS 7 8**⚠ WARNING**

It is dangerous to transfer on your own. It requires good balance and agility. Be aware that there is a point during every transfer when the wheelchair seat is not below you.

To avoid a fall:

1. Work with your health care provider to learn safe transfer methods.
  - a. Learn how to position your body and how to support yourself during a transfer.
  - b. Have someone help you until you know how to do a safe transfer on your own.
2. Lock the rear wheels before you transfer.
3. Be aware that the chair can still slide and/or tip. The wheel lock keeps the rear wheels from rolling while you are performing the transfer.
4. Make sure that the pneumatic tires are properly inflated. Low tire pressure may allow the rear wheel locks to slip. (See table in Section VII: G "Pneumatic Tires".)
5. Move your chair as close as you can to the seat you are transferring to. If possible, use a transfer board.
6. Rotate the front casters until they are as far forward as possible.
7. If you can, remove the footrests, or swing them out of the way.
  - a. Ensure your feet do not catch in the space between the footrests.
  - b. Avoid putting weight on the footrests as this may cause the chair to tip.
8. Make sure armrests are removed, or out of the way and do not interfere with the transfer.
9. Transfer as far back onto the seat surface as you can. This will reduce the risk that the chair will tip or move away from you.

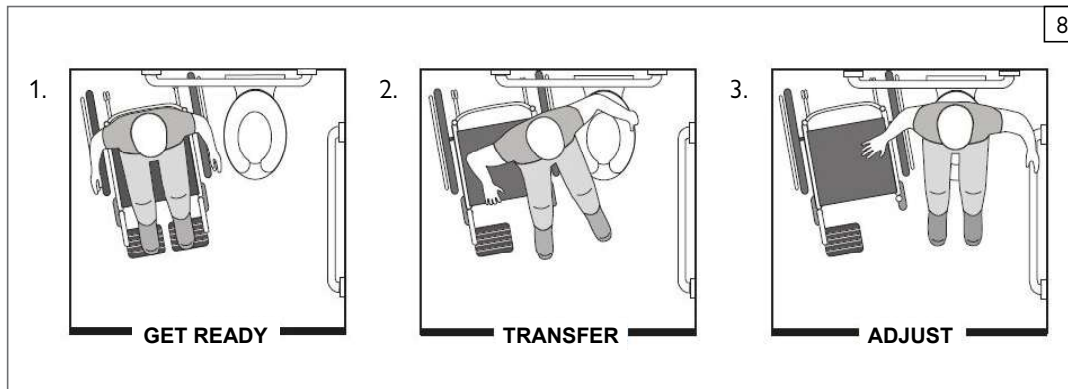
If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and can possibly cause severe injury to the rider or others.

Optimum Transfer position



Before transferring:

1. Flip back, or remove the armrests.
2. Swing away, or remove the footrests.
3. Ensure the wheel lock is set.

J. CURBS & SINGLE STEPS 9**⚠ WARNING**

Before riding over curbs, and negotiating even a single step, ALWAYS ask for assistance first. Curbs and steps can cause tipping and serious bodily harm. When in doubt as to your ability to avoid, or traverse any obstacle, always ask for help. Be aware of your riding skills and personal limitations. Develop new skills only with the help of a companion.

**For Attendant:** Each person who assists the rider with curbs and steps should read and follow all instructions and warnings pertaining to attendants and caregivers.

1. Do not try to climb a high curb or step (more than 4 inches [101mm] high) UNLESS you have help. Doing so may cause your chair to exceed its balance point and tip over.
2. Go straight up and straight down a curb or step. If you climb or descend at an angle, a fall or tip-over is likely.
3. Be aware that the impact of dropping down from a curb or step can damage your chair or loosen fasteners.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and can possibly cause severe injury to the rider or others.

## VI. SAFETY WARNINGS: FALLS & TIP-OVERS

### K. CLIMBING A CURB OR SINGLE STEP 9

#### WARNING

**For Attendant:** follow these steps to help the rider climb a curb or single step going BACKWARD:

1. Stay behind the chair.
2. Continue backward until the rear wheels contact the face of the curb or step. Lift and roll the rear wheels to the top of the curb.
3. Pull the chair backwards until the caster wheels have cleared the edge of the curb and return the chair to its rolling position.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### L. DESCENDING A CURB OR SINGLE STEP 9

#### WARNING

**For Attendant:** Follow these steps to help a rider descend a curb or single step going FORWARD:

1. Stay at the rear of the chair.
2. Several feet before you reach the edge of the curb or step, tip the chair slightly and pull it backward.
3. When the chair is at its balance point, carefully step forward until the rear wheels reach the edge of the curb or step. Then allow the rear wheels to slowly roll down onto the lower level.
4. Push the chair forward until you are standing on the lower level.
5. When the rear wheels are safely on the lower level, tilt the chair back to its balance point.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### M. STAIRS 10

#### WARNING

1. NEVER use this chair on stairs UNLESS you have someone to help you. Doing so is likely to cause a fall or tip-over.
2. Negotiating stairs with a wheelchair always requires at least two attendants for safety.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### N. CLIMBING STAIRS 10

#### WARNING

1. Use at least two attendants to move a chair and rider up stairs.
2. Move the chair and rider BACKWARD up the stairs.
3. The person at the rear is in control. They tilt the chair back to its balance point.
4. A second attendant at the front firmly grasps a non-detachable part of the front frame and lifts the chair up and over one stair at a time.
5. The attendants move to the next stair up. Repeat for each stair, until you reach the landing.

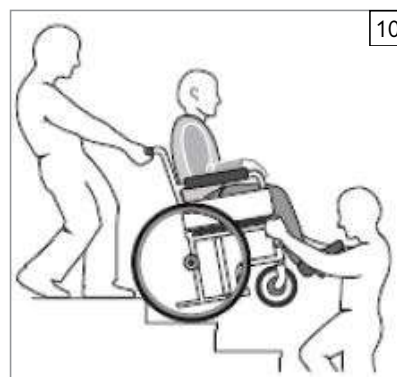
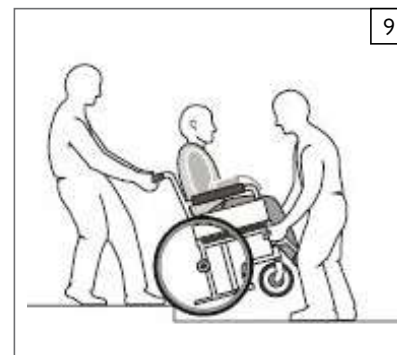
If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### O. DESCENDING STAIRS 10

#### WARNING

1. Use at least two attendants to move a chair and rider down stairs.
2. Move the chair and rider FORWARD down the stairs.
3. The person at the rear is in control. They tilt the chair to the balance point of the rear wheels and roll it to the edge of the top step.
4. A second attendant stands on the third step from the top and grasps the chair frame. They lower the chair one step at a time by letting the rear wheels roll over the stair edge.
5. The attendants move to the next stair down. Repeat for each stair, until you reach the landing.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.



## VII. WARNINGS: COMPONENTS AND OPTIONS

### A. ANTI-TIP TUBES

#### WARNING

Anti-tip tubes can help keep your chair from tipping over backward in normal conditions.

1. Sunrise Medical recommends the use of anti-tip tubes.
2. When locked in place (in the “down” position) anti-tip tubes should be BETWEEN 1-1/2 to 2 inches (38 to 51mm) off the ground.
  - a. If set higher than 2 inches (51mm), they may not prevent a tip-over.
  - b. If set lower than 2 inches (51mm), they may “hang up” on obstacles and cause a fall or tip over.
3. If you have to climb or descend a curb, or overcome an obstacle, it may be necessary to have an attendant make sure the anti-tip tubes are rotated up, and out of the way, so that the chair and rider do not get stuck and/or become unstable.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### B. ARMRESTS

#### WARNING

Armrests detach and will not bear the weight of this chair.

1. NEVER lift this chair by its armrests. They may come loose or break.
2. Lift this chair only by non-detachable parts of the main frame.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### C. CUSHIONS & SLING SEATS

#### WARNING

1. Zippie sling seats and standard foam cushions are not designed for the relief of pressure.
2. If you suffer from pressure sores or if you are at risk that they will occur, you may need a special seat system or a device to control your posture. Consult your doctor, nurse, or therapist to find out if you need such a device for your well-being.
3. Seat slings are not intended to be used as a direct seating surface. A cushion or other seating surface should be placed on the sling before use.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### D. FASTENERS

#### WARNING

Many of the screws, bolts, and nuts on this chair are special high-strength fasteners. Use of improper fasteners may cause your chair to fail.

1. ONLY use fasteners provided by a Sunrise Medical authorized dealer (or ones of the same type and strength, as indicated by the markings on the heads).
  2. Over- or under-tightened fasteners may fail or cause damage to chair parts.
  3. If bolts or screws become loose, tighten them as soon as you can.
- NOTE- For safety and optimum performance it is best to not reuse fasteners.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### E. FOOTRESTS

#### WARNING

1. At the lowest point, footrests should be AT LEAST 2-in (51 mm) off the ground. If set too LOW, they may “hang up” on obstacles you can expect to find in normal use. This may cause the chair to stop suddenly and tip forward.
2. To Avoid A Trip Or Fall When You Transfer:
  - a. Make sure your feet do not “hang up” or get caught in the space between the footrests.
  - b. Avoid putting weight on the footrests, as the chair may tip forward.
3. NEVER lift this chair by the footrests. Footrests detach and will not bear the weight of this chair. Lift this chair only by nondetachable parts of the main frame.
4. Never use the footrests of the chair to open doors, this may cause them to fail prematurely and create an unsafe situation.

If you fail to heed these warnings, damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### F. OFFSET SEATING (OPTIONAL)

#### WARNING

1. A fore/aft change in the backrest position will affect the center of balance of your chair.
2. Only use this option when installing a forward offset mounted seating solution, not using the standard back sling.
3. Each time you adjust or modify the backrest plane location, the change may make it easier to tip backwards. Use anti-tips until you adapt to the change, and are sure you are not at risk to tip over.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

## VII. WARNINGS: COMPONENTS AND OPTIONS

### G. PNEUMATIC TIRES

#### WARNING

Proper inflation extends the life of your tires and makes your chair easier to use.

1. Do not use this chair if any of the tires is under- or over-inflated. Check weekly for proper inflation level, as listed on the tire side-wall.
2. Low pressure in a rear tire may cause the wheel lock on that side to slip and allow the wheel to turn when you do not expect it.
3. Low pressure in any of the tires may cause the chair to veer to one side and result in a loss of control.
4. Over-inflated tires may burst.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

		Recommended Pressure or Pressure Range	
Tires	Zippie Zone	kPa	PSI
Pneumatic (12-in) (203mm)	x	270	40
Pneumatic (16-in) (305mm)	x	240	35
Pneumatic (20-in) (451mm)	x	448	65
Pneumatic (22-in) (501mm)	x	448	65
Pneumatic (24-in) (540mm)	x	517	75
Pneumatic (26-in) (590mm)	x	448	65
High Pressure Clincher (22-in) (501mm)	x	690	100
High Pressure Clincher (24-in) (540mm)	x	758	110
High Pressure Clincher (25-in) (559mm)	x	758	110
Knobby V-Track (24-in) (540mm)	x	448	65
Schwalbe Marathon (22-in) (501mm)	x	586-1000	85-145
Schwalbe Marathon (24-in) (540mm)	x	586-1000	85-145
Schwalbe Speed	x	586-1000	85-145
Schwalbe Marathon Plus Evol	x	586-1000	85-145

### H. POSITIONING BELTS (OPTIONAL)

#### WARNING

The positioning belt is predominately used to support your posture. It can also be used to limit slipping and/or sliding that you might experience when the chair is in motion. The positioning belt is not a transit-rated safety belt and should not be used in the place of a seat belt while being transported in a motor vehicle. Improper use of positioning belts may cause severe injury or death. If you use a positioning belt, be sure to follow the recommendations in this section:

1. Make sure the rider does not slide down in the wheelchair seat. If this occurs, the rider may suffer chest compression or suffocate due to pressure from the belts.
2. The belts must be snug, but must not be so tight that they interfere with breathing. You should be able to slide your open hand, flat, between the belt and the rider.
3. A pelvic wedge or a similar device can help keep the rider from sliding down in the seat. Consult with the rider's doctor, nurse, or therapist to find out if the rider needs such a device.
4. Use positioning belts only with a rider who can cooperate. Make sure the rider can easily remove the belts in an emergency.
5. NEVER Use Positioning Belts:
  - a. As a patient restraint. A restraint requires a doctor's order.
  - b. On a rider who is comatose or agitated.
  - c. As a motor vehicle restraint. In an accident or sudden stop the rider may be thrown from the chair. Wheelchair seat belts will not prevent this, and further injury may result from the belts or straps.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### I. POWER DRIVE (OPTIONAL)

#### WARNING

Do not install a power drive on any Zippie wheelchair that has not been approved by Sunrise Medical.

1. It will affect the center of balance of your chair and may cause a fall or tip-over.
2. It will alter the frame and void the warranty.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### J. PUSH HANDLES (OPTIONAL)

#### WARNING

When you have a attendant, make sure that this chair has push handles.

1. Push handles provide secure points for an attendant to hold the rear of this chair, to prevent a fall or tip-over.
2. Check to make sure push handle grips will not rotate or slip off.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.



## VII. WARNINGS: COMPONENTS AND OPTIONS

### K. QUICK-RELEASE AXLES

#### WARNING

1. Do not use this chair UNLESS you are sure that both quick-release rear axles are locked.
2. An axle is not locked until the quick-release button pops out fully.
3. An unlocked axle may come off during use, resulting in a fall, tip-over, or loss of control and cause severe injury to the rider or others.
4. Quick-Release Axles should be periodically cleaned and inspected for function and signs of wear or bending. Replace as necessary.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### L. REAR WHEEL

#### WARNING

A change in set-up of the rear wheels will affect the center of balance of your chair.

1. The farther you move the rear axles FORWARD, the more likely it is that your chair will tip over backward.
2. Consult your health care provider to find the best rear axle setup for your chair. Do not change the set-up UNLESS you consult your health care provider first.
3. Adjust the rear wheel locks after you make any change to the rear axles.
  - a. If you fail to do so, the locks may not work.
  - b. Make sure lock arms embed in tires at least 1/8-in (3mm) when locked.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### M. REAR WHEEL LOCKS (OPTIONAL)

#### WARNING

Rear wheel locks are NOT designed to slow or stop a moving wheelchair. Use them only to keep the rear wheels from rolling when your chair is at a complete stop.

1. NEVER use rear wheel locks to try to slow or stop your chair when it is moving. Doing so may cause a fall or tip-over.
2. To keep the rear wheels from rolling, always set both rear wheel locks when you transfer to or from your chair.
3. Low pressure in a rear tire may cause the wheel lock on that side to slip and may allow the wheel to turn when you do not expect it.
4. Make sure lock arms embed in tires at least 1/8-in (3 mm) when locked. If you fail to do so, the locks may not work.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### N. MODIFIED SEAT SYSTEMS

#### WARNING

Use of a seat system not approved by Sunrise Medical may alter the center of balance of this chair. This may cause the chair to tip over.

1. Do not change the seat system of your chair UNLESS you consult your Sunrise Medical authorized dealer first.
2. Use of a seating system not approved by Sunrise Medical may affect the folding mechanism of this chair.
3. Use of a seating system not provided by Sunrise Medical is prohibited for transit use.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### O. TRANSIT OPTION

#### WARNING

1. Use only Wheelchair Tiedown and Occupant Restraint Systems (WTORS) which meet the requirements of SAE J2249 Recommended Practice - Wheelchair Tiedown and Occupant Restraint Systems For Use in Motor Vehicles. Do not use WTORS designed to rely on the wheelchair structure to transfer occupant restraint loads to the vehicle.
2. The wheelchair has been dynamically tested in a forward-facing mode for a 30 mph (48 kph) frontal impact test. The wheelchair must be forward-facing during transport.
3. In order to reduce the potential of injury to vehicle occupants, wheelchair-mounted accessories, such as trays and respiratory equipment, should be removed and secured separately.
4. Postural supports and positioning devices should not be relied on for occupant restraint.
5. Do not alter or substitute wheelchair frame parts, components, or seating.
6. Sudden stops or impacts can structurally damage your chair. Chairs involved in such incidents should be replaced.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### P. UPHOLSTERY FABRIC

#### WARNING

1. Replace worn or torn fabric of seat and seat back as soon as you can. If you fail to do so, the seat may fail.
2. Sling fabric will weaken with age and use. Look for fraying or thin spots, or stretching of fabrics at rivet holes.
3. "Dropping down" into your chair will weaken fabric and result in the need to inspect and replace the seat more often.
4. Be aware that laundering or excess moisture will reduce flame retardation of the fabric.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

## VII. WARNINGS: COMPONENTS AND OPTIONS

### Q. BACKREST TENSION ADJUSTABLE

#### WARNING

The Tension Adjustable Backrest is a versatile back intended to replace wheelchair seat sling upholstery. It is designed to provide simple, comfortable, and effective support to help maximize function and increase seating tolerance. In addition, it is lightweight, durable, and easy to use.

Sunrise Medical recommends that a clinician such as a doctor or therapist experienced in seating and positioning be consulted to determine if the Backrest Tension Adjustable is appropriate. Backs should only be installed by a Sunrise Medical authorized dealer.

**Maximum user weight 165 lbs. (75 kg.)**

#### WARNING

**Installing a back support on a wheelchair may affect the center of gravity of the wheelchair and may cause the wheelchair to tip backwards potentially resulting in injury.**

**Always assess for the potential need for anti-tips to be added to the wheelchair to help increase the stability.**

#### WARNING

**Do not use the Backrest Tension Adjustable to push or lift the wheelchair. Improper use may cause the back to unexpectedly detach from the wheelchair.**

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### R. FOLDING LOCK DOWN ANGLE ADJUSTABLE BACKREST

#### WARNING

Only adjust backrest angle when in a safe and stable position. You may increase the likelihood of tipping or instability.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### S. SEAT BACK

#### WARNING

**Adjusting the seat back depth could cause the strut tube to be located in a position where it could contact the user and cause skin breakdown or other serious injuries.**

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

### T. ANTI-TIP RECEIVERS

#### WARNING

**The Anti-tip receivers are designed to move with the axle location and are assembled in our manufacturing facilities.**

1. Do not attempt to change the location of the anti-tip receivers, or remove them UNLESS you consult your Sunrise Medical authorized dealer first.
2. Use of an anti-tip system not approved by Sunrise Medical may affect the center of gravity of the chair and lead to a fall or tip-over.

If you fail to heed these warnings damage to your chair, a fall, tip-over, or loss of control may occur and cause severe injury to the rider or others.

**! WARNING**

The owner and/or caregiver of this chair is responsible for ensuring that it has been set up and adjusted by a trained service professional under the advice of a health care provider. The chair may require periodic safety and function checks or certain tool-free adjustments that can be performed by the owner, caregiver, or Sunrise Medical authorized dealer, if desired. Always use parts and/or accessories that have been recommended or approved by Sunrise Medical when servicing this chair.

**A. INTRODUCTION**

1. Proper maintenance will improve performance and extend the useful life of your chair.
2. Clean your chair regularly. This will help you find loose or worn parts and make your chair easier to use. You will need a mild detergent solution and plenty of cleaning rags.
3. If discovered, repair or replace loose, worn, bent, or damaged parts **before using the chair**. ALWAYS be sure to use parts and/or accessories that have been recommended or approved by Sunrise Medical.
4. To protect your investment, have all major maintenance and repair work done by your Sunrise Medical authorized dealer.
5. Inspect and maintain this chair strictly per the maintenance chart.
6. If you detect a problem, make sure to order parts, or have service and repair work done at your Sunrise Medical authorized dealer before use.
7. At least once per year, have a complete inspection, safety check, and service of your chair made by a Sunrise Medical authorized dealer.

**B. CRITICAL SAFETY CHECKS**

1. Tire Air Pressure:  
Check air pressure in pneumatic tires at least ONCE PER WEEK. The wheel locks will not grip properly if you fail to maintain the air pressure shown on tire sidewall.
2. Axles & Axle Sleeves:  
When checking axles and axle sleeves every six months, ensure they are clean and tight. Loose sleeves will damage the axle plate and will affect performance.

**C. CLEANING**

1. Paint Finish
  - a. Clean the painted surfaces with mild soap or detergent at least once a month.
  - b. Protect the paint with a coat of non-abrasive auto wax every three months.
2. Axles and Moving Parts
  - a. Clean around axles and moving parts WEEKLY with a slightly damp (not wet) cloth.
  - b. Wipe off or blow away any fluff, dust, or dirt on axles or moving parts.
3. Upholstery
  - a. Hand-wash (machine washing may damage fabric).
  - b. Drip-dry only. DO NOT machine dry as heat will damage fabric.
4. Tension Adjustable Upholstery
  - a. To Clean Center Panel remove Center Pane from wheelchair. Panel may be wiped clean with soap and water. Allow to fully dry in warm, dry area. No other maintenance should be required.
  - b. To Clean Strap System remove Strap Systems from wheelchair. Straps may be lightly soaked or wiped clean with soap.

5. Basic Maintenance Materials available at local store
  - a. Tire Pump
  - b. Tire Pressure Gauge
  - c. Clean rags or cotton cloth
  - d. Teflon®-based lubricant
  - e. Mild detergent

**NOTE** - You do not need to grease or oil the chair.

**D. SAFETY CHECKLIST**

Weekly	Monthly	3 Months	6 Months	Annually	Safety & Function Check
<input checked="" type="checkbox"/>					Tire inflation level
<input checked="" type="checkbox"/>					Wheel locks
		<input checked="" type="checkbox"/>			Visually check for loose hardware
			<input checked="" type="checkbox"/>		Armrests
			<input checked="" type="checkbox"/>		Axle and axle sleeves
		<input checked="" type="checkbox"/>			Quick-release axles
		<input checked="" type="checkbox"/>			Wheels, tires, and spokes
		<input checked="" type="checkbox"/>			Casters
		<input checked="" type="checkbox"/>			Anti-tip tubes
			<input checked="" type="checkbox"/>		Frame, camber tubes, and crossbrace
	<input checked="" type="checkbox"/>				Upholstery
				<input checked="" type="checkbox"/>	<b>Service by Sunrise Medical authorized dealer</b>

**NOTE** - The user or caregiver should perform these weekly and monthly checks to maintain the safety of their chair. If an item is not working properly, please contact your Sunrise Medical authorized dealer.

**E. TROUBLESHOOTING CHART**

Symptoms	Left turn in chair	Right turn in chair	Looseness in chair	Sluggish turning	Squeaks and rattles	Caster flutter	Solution
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
					<input checked="" type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
							Make sure tire pressure is correct and equal in both rear tires and front caster tires, if pneumatic.
			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Make sure all nuts and bolts are tight.
			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		Make sure all spokes and nipples are tight on radial spoke wheels.
					<input checked="" type="checkbox"/>		Use Tri-Flow Lubricant (Teflon®-based) between frame connections and parts.
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Check for proper caster fork adjustment. See instructions for caster fork adjustment.

## VIII. USE AND MAINTENANCE

### F. TO MOUNT AND REMOVE REAR WHEELS 1 2

#### **WARNING**

**Do not use this chair UNLESS you are sure both quick-release axles are locked. An unlocked axle may come off during use and cause a fall.**

**NOTE**— Setting the wheelchair on a flat surface, such as a workbench or table, helps make these procedures easier.

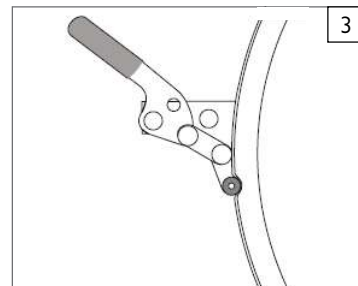
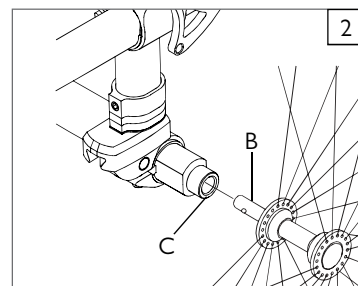
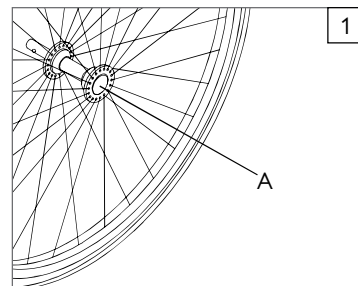
#### 1. To Install Wheel

- a. Depress quick-release button (A) fully.
- b. Insert axle (B) through hub of rear wheel.
- c. Keep button (A) depressed as you slide axle (B) into camber plug (C).
- d. Release button to lock axle in camber plug. Adjust axle if it does not lock. See Section IX: E.
- e. Repeat steps on other side.

#### 2. To Remove Wheel

- a. Depress quick-release button (A) fully.
- b. Remove wheel by sliding axle (B) completely out of camber plug (C).
- c. Repeat steps on other side.

**NOTE**— The axle is not locked until the quick-release button pops out fully (A). Check that the axle is locked by pulling on the wheel in the direction of the axle.



### G. WHEEL LOCKS 3

#### **WARNING**

Wheel locks are installed at Sunrise and should be adjusted by your qualified service person. Inspect wheel locks weekly per the maintenance chart. Do not use your chair UNLESS you are sure both wheel locks can fully engage. A wheel lock that is not correctly adjusted may allow your chair to roll, or turn unexpectedly.

Wheel locks must be adjusted after making sure the tires have the correct air pressure. When fully engaged, the arm should be inbedded into the tire at least 1/8-in (3 mm) to be effective. If you find the wheel locks have slipped or are not working correctly contact your Sunrise Medical authorized dealer for proper adjustment.

### H. HUB LOCK

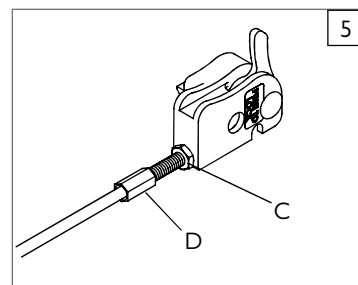
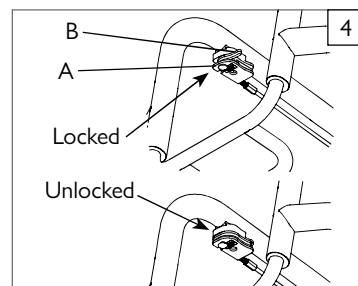
#### To operate Hub Lock 4

1. To lock rear wheels, press button A. Lever B will flip outward.
2. To unlock wheels, press lever B back down until button A pops back out. Each lever operates one side of the chair. To fully lock chair, both buttons must be pushed.

**NOTE**— Do not engage hub lock when chair is in motion.

#### To adjust the cables 5

1. Loosen jam nut (C) using a 10mm wrench.
2. Turn adjustment screw (D) in or out as necessary. Turning screw toward the housing will loosen the cable. Turning screw away from the housing will tighten the cable.
3. Re-tighten jam nut (C) against lever mount.
4. Repeat steps 1-3 for opposite side of chair as necessary.



### I. SIDEGUARD MOUNT 5 6

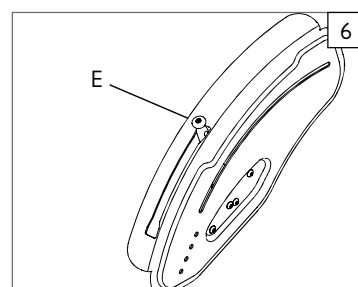
#### To Operate

1. To lock, lift handle (E) and pull lever towards backrest until it engages.
2. To unlock, lift handle (E) and slide forward to front of sideguard until it drops into position.

#### To adjust the cables

Note: Adjustment cables are located on the back side of the sideguard.

1. Loosen jam nut (C) using a 10mm wrench.
2. Turn adjustment screw (D) in or out as necessary. Turning screw upward will loosen cable, turning downward will tighten cable.
3. Re-tighten jam nut (C) against lever mount.
4. Repeat steps 1-3 for opposite side of chair as necessary.



**J. ANTI-TIPS** 7 8

Sunrise Medical recommends anti-tip tubes for all wheelchairs. Use torque setting of 7 Nm [62 in-lbs] when installing anti-tip tubes.

**1. Inserting Anti-tip Tubes Into Receiver**

- a. Press the rear anti-tip release button (F) on the anti-tip tube so that both release pins are drawn inside.
- b. Insert the anti-tip tube (G) into the anti-tip receiver (H).
- c. Turn the anti-tip tube down until release pin is through the receiver mounting hole.
- d. Insert second anti-tip tube the same way.

**2. Adjusting Anti-Tip Tube Wheel**

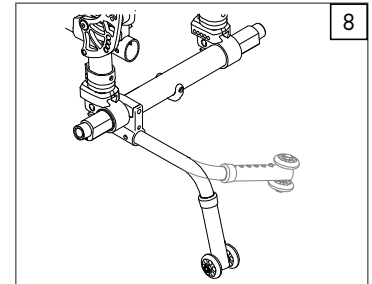
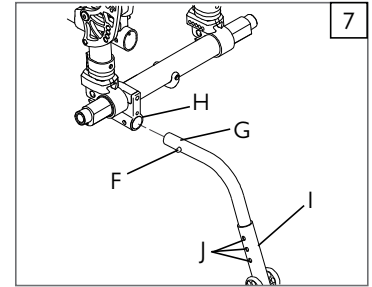
The anti-tip wheels may have to be raised or lowered to achieve proper clearance of 1-1/2 to 2-in (38 to 51 mm).

Press the anti-tip wheel release button (I) so that both release pins are drawn inside. Raise or lower to one of the three pre-drilled holes (J). Release button. Adjust the second anti-tip tube wheel the same way. Both wheels should be the same height.

**3. Turning Anti-Tip Tubes Up**

Turn anti-tip tubes up when being pushed by attendant, overcoming obstacles, or climbing curbs.

Press the rear anti-tip tube release button (F). Hold button in and turn anti-tip tube up. Release the lever and repeat with second anti-tip tube. Remember to return anti-tip tubes to down position after completing maneuver.

**K. SINGLE POST HEIGHT-ADJUSTABLE ARMRESTS (Optional)** 9**1. Installation**

- a. Slide the outer armpost into the receiver mounted to the wheelchair frame.
- b. The armrest will automatically lock into place.

**2. Height Adjustment**

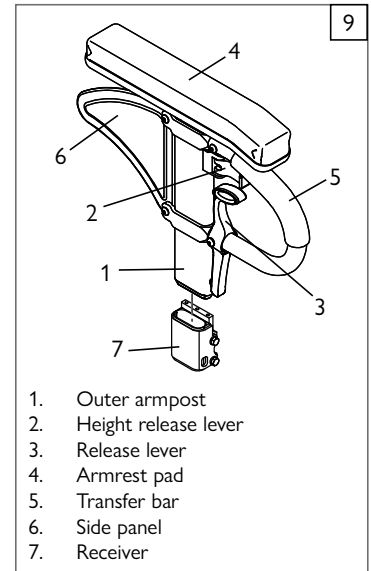
- a. Rotate height release lever (2) to second stop.
- b. Slide armrest pad up or down to desired height.
- c. Return lever to locked position against armpost.
- d. Push arm pad (4) until upper armpost locks firmly into place.

**3. Removing Armrest**

- a. Pull lever 3 and lift entire arm.

**4. Replacing Armrest**

- a. Slide armrest back into receiver.
- b. Make sure that the unlocking lever (3) returns to the locked position against armpost.



1. Outer armpost
2. Height release lever
3. Release lever
4. Armrest pad
5. Transfer bar
6. Side panel
7. Receiver

**L. PADDED SWING-AWAY ARMRESTS (Optional)** 10 11

Swing-away armrests can be detached or can swing away to allow lateral transfers. They are height adjustable (6-in (152 mm) in 1-in (25 mm) increments) by moving bolts (A) up or down in pre-drilled holes on armrest bracket. Swing-away, removable armrests are installed by sliding armrest into receiver (B) on back frame.

**Swing-away, angle adjustable**

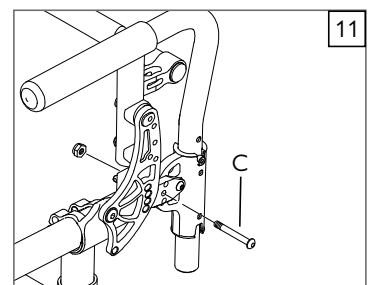
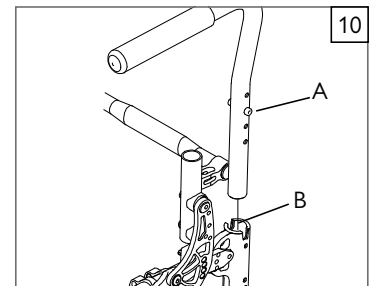
To change the angle, remove bolts (C), reposition to needed angle. Reinsert bolt and tighten.

The Padded Swing Away Armrest is primarily used for resting the forearms of the chair's occupant. It is not designed to be a transfer arm for the wheelchair. You should always remove the armrests or swing them out of the way during transfers. The armrests are not designed to be used for any activity that puts full body weight on them, such as transferring using this armrest.

Failure to follow these instructions can result in severe injury, decreased chair integrity and may void the warranty.

**⚠ WARNING**

Padded swing away armrests are not transfer devices and must be rotated out of the way prior to transferring. Failure to do this on a regular basis can result in decreased chair integrity and may void the warranty.

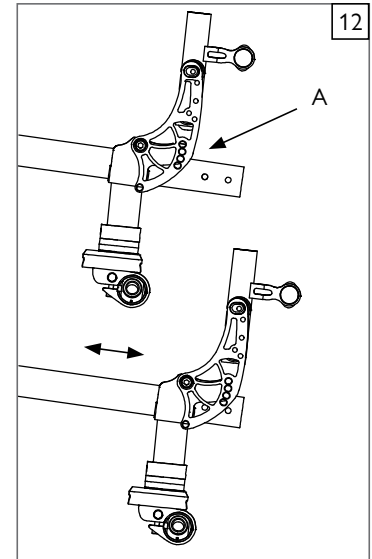




## VIII. USE AND MAINTENANCE

### M. DEPTH ADJUSTABLE BACKREST 12

The backrest may be adjusted for depth change by loosening the two bolts on each side of the axle backrest bracket (4 bolts total) (A) and sliding the assembly. Once both sides (RH & LH) are positioned and aligned with each other, tighten bolts (A) to specified torque.

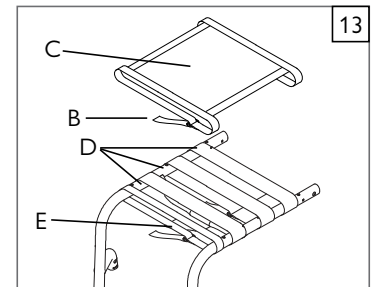


### N. TENSION ADJUSTABLE SEAT SLING ADJUSTMENT 13

The tension adjustable seat sling (C) can be adjusted for depth change by loosening the front hook and loop strap (B) and unfolding to the desired depth. Once the sling length is set, replace and re-tension the front tension adjustable sling (B).

To increase depth, unfold hook and loop flap (B) to add one or two additional inches.

Straps on frame (D & E) should be tightened before replacing sling (C).



**O. BACKREST TENSION ADJUSTABLE** 14 15 16 17**To install the Backrest Tension Adjustable**

1. Slide hook and loop straps (F) over the backrest frame section. Make sure to include at least one strap below the towel bar (if using a rigid chair).
2. Tighten the straps appropriately to desired tension level. **DO NOT** overtighten straps as this will cause undue strain upon the chair backrest frame (G).
3. If using fold down push handles, insert the single hook and loop strap (H) through the slots in the front of the push handles (I). If using integral push handles (J), slide straps from bottom of backrest upward.
4. Install backrest cover at desired level and fold over rear of hook and loop strapping system (K). The Zippie patch should be upright on the rear of the chair.
5. Finish installation by placing vanity flap (center panel) down onto hook and loop material on the seat sling to secure attachment (L).

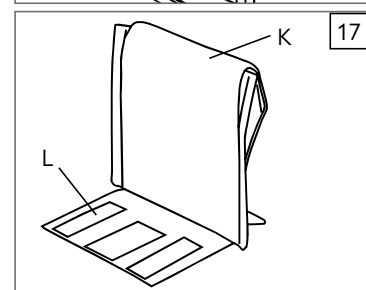
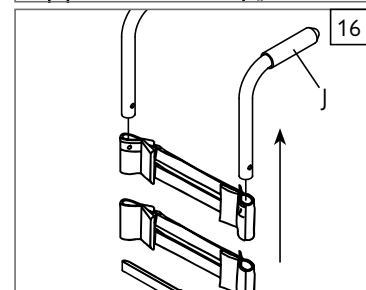
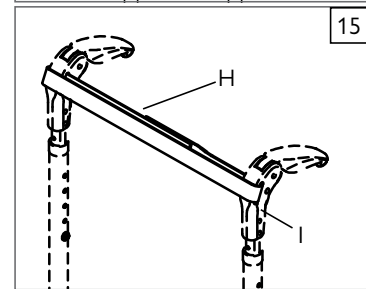
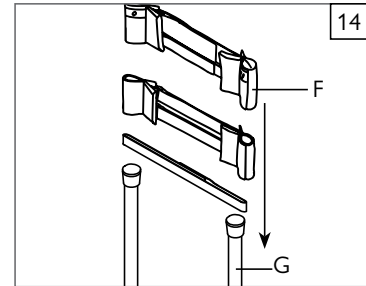
**Adjusting the Backrest Tension Adjustable**

Suggest using anti-tips while making any adjustments. Ensure anti-tips are safely secured and in a position to prevent the wheelchair from tipping backwards.

1. User can transfer into wheelchair. Place wheel locks in the locked position.
2. From the rear of the wheelchair the attendant can lift the Vanity Flap (center panel) to access the strap system. Adjust straps for optimal balance and trunk alignment. Ensure the hook and loop straps have a minimum of 2-in (51 mm) of engagement, hook securing to loop. Press the hook and loop together to ensure it is securely engaged.
3. Once adjustments have been finalized replace Vanity Flap to its original position.

**⚠ WARNING**

**Any changes made to the straps will affect the center of gravity. Suggest the user has the attendant stationed behind the wheelchair to prevent the wheelchair from tipping backwards while they become accustomed to the adjustment.**

**P. BACK ANGLE ADJUSTMENT** 18 19 20 21**Folding and Unfolding Backrest** 18

1. Release the backrest by pulling the release cord (A) with a simple, short force.
2. While maintaining tension on the release cord, rotate the backrest to the desired angle or to the folded down position.
3. Lock the backrest in place by releasing the cord and allowing the pins (B) to engage in the nearest hole (C) of the backrest bracket (D).

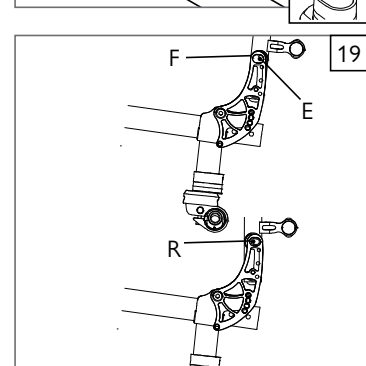
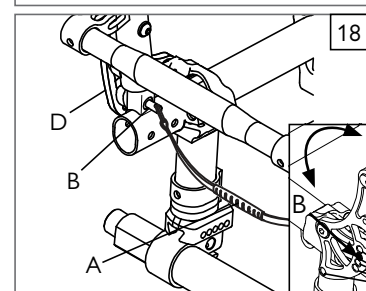
**CAUTION-** Be sure the pins (B) are fully engaged through the backrest bracket (D) on both sides of the chair. Test the backrest to be sure it is locked before use.

**CAUTION -** When changing the back angle of the wheelchair both the left and right angle adjustable back bracket must be in the same hole position before the wheelchair is to be used.

**Adjusting Backrest Options** 19

Backrest bracket has two positions, Forward Mount and Rearward Mount. Change the bracket position by removing bolt (E) and pivoting the bracket forward or rearward. Reinsert the bolt in the new position and tighten. Then follow the instructions for "Folding and Unfolding backrest".

**F= Forward Mount, R= Rearward Mount**

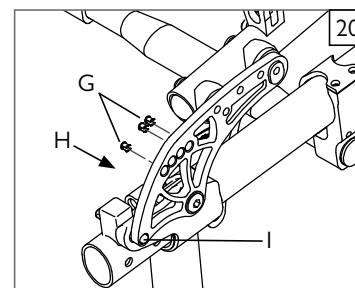


## VIII. USE AND MAINTENANCE

### Backrest Angle Preset Plugs 20


The preset plugs allow you to un-employ the backrest bracket holes you do not wish to use. This allows the backrest to automatically lock into your desired angle position after unfolding.

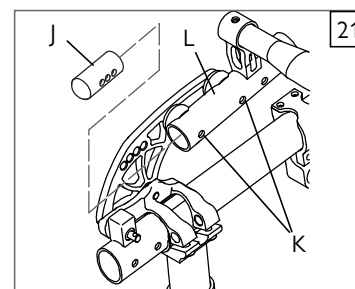
1. Determine which backrest bracket holes you do not want to use.
2. Insert plugs (G) into the predetermined holes from the chair side of the bracket (H).
3. To ensure the backrest will lock in the folded position, do not insert a plug into the lowest hole position (I).



### Backrest Adjuster Stop 21

The preset stop allows the ability to place a firm stop at desired angle. The hole pattern in the backrest adjuster stop corresponds with the hole pattern in the backrest bracket (4 holes for each piece).

1. Determine the desired Stop Position.
2. Remove the lower backrest bracket button head fastener (K) and loosen the top slightly (K).
3. Adjust the Backrest Adjuster Stop (J) into the Backrest Frame (L) to desired position
4. Insert backrest bracket hardware (K) and retighten to 7 Nm [62 in.-lbs.]. 
5. Repeat process on opposite side. Ensure both sides are using the same Stop Position.



## Q. CUSHION INSTALLATION

Place cushion on seat sling with hook and loop side down. The beveled edge of the cushion should be in front. Press firmly into place.

## R. STORAGE TIPS

1. Store your chair in a clean, dry area. If you fail to do so, parts may rust or corrode.
2. Before using your chair, ensure it is in proper working order. Inspect and service all items on the "Maintenance Chart".
3. If stored for more than three months, have your chair inspected by a Sunrise Medical authorized dealer before use.

## S. INSPECT

After the wheelchair is assembled and adjusted, it should roll smoothly and easily. All accessories should also perform smoothly. If you have any problems, follow these procedures:

- a. Review the set-up and check-out sections and operating guide to ensure the chair was properly prepared.
- b. Review troubleshooting guide.
- c. If your problem persists, contact your Sunrise Medical authorized dealer. If you still have a problem after contacting your authorized dealer, contact Sunrise Medical customer service. See the introduction page for details on how to contact your authorized dealer or Sunrise Medical customer service.

### **WARNING**


The owner of this chair is responsible for ensuring that it has been setup and adjusted by a trained service professional under the advice of a health care provider. Service and/or adjustments should only be done with the advice of a health care provider. Always use parts and/or accessories that have been recommended and approved by Sunrise Medical when servicing this chair. Service and/or adjustments that require the use of tools should only be done by a Sunrise Medical authorized dealer under the advice of a health care provider.

## **A. DEALER SERVICE INTRODUCTION**

1. At least once per year, this chair should have a complete inspection, safety check, and regular service made by a Sunrise Medical authorized dealer. The tool list at right is a good starting point for proper maintenance.
2. Torque settings – A torque setting is the optimum tightening which should be made on a particular fastener. It is important to use proper torque settings where specified.
3. If you have discovered a worn, bent, or damaged part(s), repair or replace them with recommended parts **before returning this chair to service.**
4. All major maintenance and repair work should be done by the Sunrise Medical authorized dealer.

## **B. CRITICAL MAINTENANCE TIPS**

### **1. Torque settings:**

A torque setting is the optimum tightening which should be made on a particular fastener. It is important to use proper torque settings where specified. When not specified, torque settings should be: M5 fasteners = 5 Nm [44 in-lbs], M6 fasteners = 7 Nm [62 in-lbs], M8 fasteners = 10 Nm [88 in-lbs]. For all others torque setting should be 6.8 Nm [60 in-lbs]. 

### **2. Dealer Service and Adjustment Reference materials:**

Go to [www.SunriseMedical.com](http://www.SunriseMedical.com) for parts manuals, instruction sheets, and instructional videos that will aid in the repair of your Zippie wheelchair.

## **C. CLEANING**

### **1. Paint Finish**

- a. Clean the painted surfaces with mild soap or detergent.
- b. Protect the paint with a coat of non-abrasive auto wax.

### **2. Axles and Moving Parts**

- a. Clean around axles and moving parts with a slightly damp (not wet) cloth.
- b. Wipe off or blow away any fluff, dust, or dirt on axles or moving parts.
- c. **DO NOT USE** 3-in-ONE oil, or WD-40® for lubrication. Only use Teflon® based lubricant when working on this wheelchair.

## **D. REAR AXLE**

The most important adjustment on your Zippie wheelchair is the position of the rear axle. The center of gravity and wheel camber are determined by the axle adjustment.


### **1. Center of Gravity Adjustment** 25

### **WARNING**

The more you move your rear wheels forward, the more likely your chair will tip over backwards. Always make adjustments in small increments, and check the stability of your chair with a spotter to prevent a tip-over. We recommend that you use anti-tip tubes until you adapt to the change and are sure you are not at risk to tip over. Refer to additional Warnings in Section VI "Falls and Tip Overs".

**NOTE** – Changes to the center of gravity may affect the rear seat height (Section I), toe-in/toe-out of the rear wheels (Section D-3) and the squareness of the casters (Section G). If you change your center of gravity position, re-adjust all of these settings if necessary.

**NOTE** – Adjusting your chair's center of gravity will require re-adjusting the location of the wheel locks (if provided). See Section J for instructions on adjusting the wheel locks.

You can adjust your center of gravity position by moving the camber clamp (C) fore or aft of the axle plate (A). Using a 4mm Allen Key remove the bolt (B) from both the left and right side of the wheelchair. Position the camber clamp in the new preferred center of gravity location. Secure bolt back into position using 7 Nm [62 in-lbs] of torque. 

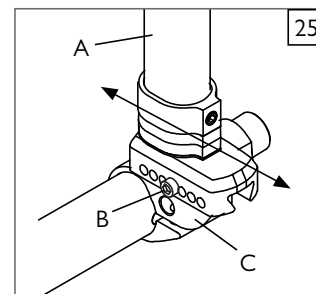
Ensure both sides of the wheelchair are using the same center of gravity position settings.

Once the axle plate and camber clamp are secured, attach the rear wheels, occupy the chair and maneuver it with a spotter to get a feel for the new adjustment.



### **TOOLS YOU WILL NEED**

1. Imperial Hex key set
2. Metric Hex key set
3. Imperial Open-end Wrench set
4. Metric Open-end Wrench set
5. Torque wrench
6. Imperial Hex bit Socket set
7. Metric Hex bit Socket set
8. Phillips and Flat screwdrivers



## IX. DEALER SERVICE & ADJUSTMENT

### 2. Wheel Camber 26

Wheel camber, shown as angular relationship (D), provides greater side-to-side stability due to the increased width and angle of the wheelbase. It also allows for quicker turning and greater access to the top of the handrims.

Wheel camber is determined by pairs of interchangeable camber plugs which are available from your authorized dealer in 0°, 3°, and 6° angles.


### 3. Setting Toe-in toe-out to zero 27282930

**NOTE**— A wheelchair equipped with 0° camber plugs cannot have a toe-in toe-out condition. This adjustment is only required when using 3° and 6° camber plugs.

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


#### Setting the Toe to Zero

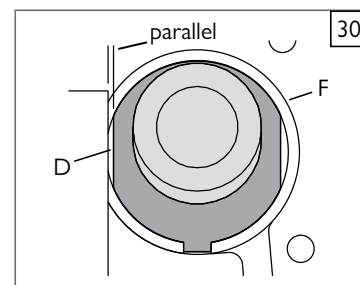
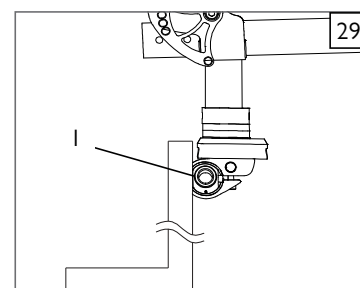
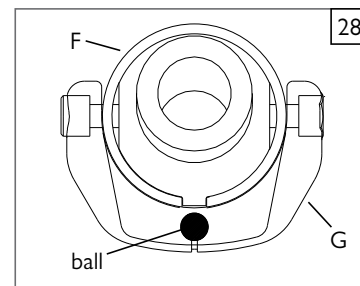
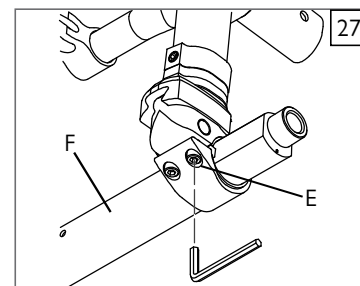
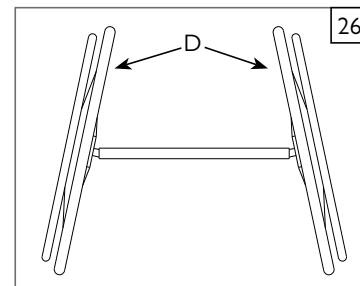
Loosen the 2 cap screws (E) (2 per side) that secure the camber tube clamp. Observe the ball in the level (G), and rotate the camber tube (F) until the ball is centered in the level. The toe is now set at zero.

Before tightening the screws (E), make certain that the camber tube is centered left-to-right relative to the wheelchair frame. There should be an equal gap on both sides or none at all. Torque fasteners to 7 Nm [62 in-lbs]. 

#### Setting the Toe to Zero— Alternative Method

Place the entire wheelchair on a flat, horizontal table or ground surface. Loosen the 2 cap screws (E) (2 per side) that secure the camber tube clamp. Locate the flat surfaces on the front and rear of the camber plugs (I). Place an object that is known to have an accurate 90° corner (such as a carpenter's square, drafting triangle, etc.) down on the flat, horizontal surface and up against the flat of the camber plug. Rotate the camber tube and plug assembly until the flat surface of the camber plug is parallel to the measuring tool.

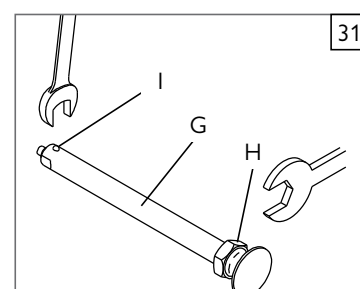
Before tightening the screws (E), make certain that the camber tube is centered left-to-right relative to the wheelchair frame. There should be an equal gap on both sides of the wheelchair or none at all. Torque the fasteners to 7 Nm [62 in-lbs]. 



### E. REAR WHEEL AXLE NUT ADJUSTMENT 31

Tight axle sleeves should be maintained for proper performance of the wheelchair.

- To adjust the axle (G) you will need a 3/4-in wrench to turn the outside axle nuts (H).
- You will also need a 1/2-in wrench to lodge the ball bearings (I), on the opposite end of the axle, and prevent the axle from turning.
- Turn the outside axle nut (H) clockwise to tighten.
- There should only be zero to ten thousandths of an inch (.010-in (.25 mm)) of play.



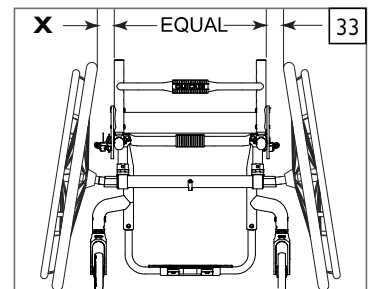
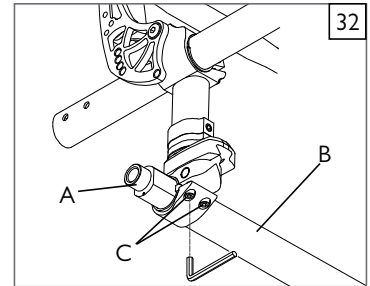


**F. REAR WHEEL SPACING** 32 33

Rear wheel spacing is measured as the gap between the top of the rear wheels and the back-canes, and is shown as dimension X (Fig 33) . Factory settings will be as narrow as possible depending on the options chosen.

**NOTE**– When setting the rear wheel spacing only make adjustments to one side of the chair at a time. Loosening both sides will undo the toe setting.

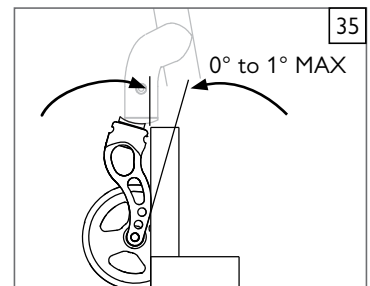
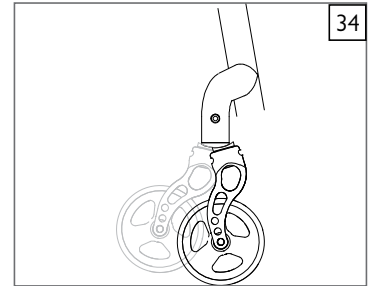
To adjust the rear wheel spacing, the camber inserts (A) telescope in and out of the camber tube (B) with hard stops at the outer limit of travel. On the left side of the chair, loosen screws (C) (the ones closest to the camber tube). Slide the camber insert in or out to establish the required wheel spacing. Tighten screw to 7 Nm [62 in-lbs]. Repeat on the right side of the chair, matching the wheel spacing set on the left side.

**G. CASTERS**

**NOTE** Setting the wheelchair on a very flat table or a workbench makes this setting more accurate.

**1. Adjusting Caster Angle** 34 35**Checking for Caster Squareness:**

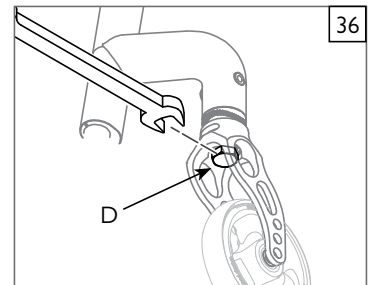
Your Zippie wheelchair leaves the factory with the casters adjusted square. Any time you change your wheelchair rear axle height, rear tire size, center of gravity position, or camber tube, you should check that the casters are still square. A caster that is not square will result in the caster lifting off the floor as it rotates around the stem bolt (Fig 34) and may also lift the front of the wheelchair up and down. Check for squareness by placing your wheelchair on a flat, horizontal surface. Rotate both forks so that the casters are towards the rear of the wheelchair. Place a square or pocket level against the flat surface on the rear of the fork and note whether this surface is vertical (square) (Fig. 35). If this surface is more than 1 degree away from vertical, your casters require re-squaring.

**2. Re-squaring Your Casters** 36 37

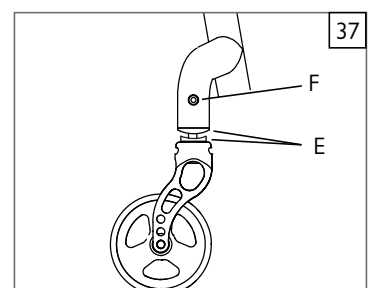
Locate the screw (D) inside the right caster tube and loosen using a 10mm open ended wrench. Do not remove the screw. Simply loosen it enough to allow the teeth on the upper and lower splines (E) to clear one another. With the stem bolt loosened, the caster fork should pivot freely. Place the wheelchair on the floor so that the two rear wheels and left caster contact the floor. Place some weight in the seat towards the rear to help stabilize the chair. Place a square or pocket level against the flat surface of the fork and pivot the fork until it is vertical (square) (Fig. 35). With the fork vertical, engage the teeth of the two splines to the closest mating position. Make certain that the teeth are properly engaged and not crossed. Shine a bright light behind the mating spline teeth and check for proper teeth engagement. Tighten the screw (D) to secure the spline mating position. The screw should be tightened to 10.2 Nm [90 in-lbs] to ensure that it does not loosen during use.



Record the teeth engagement position of the splines on the right fork, and adjust the left fork in a similar fashion to the same position. Reassemble both casters, and re-check that they are square. Replace caps.

**3. 3-D Perpendicular Alignment** 37

The allen bolt adjustment (F) provides another dimension of adjustability in addition to the spline system. The bolt may be loosened to relieve tension in the stem assembly. The caster angle may then be fine-tuned and the bolt retightened.

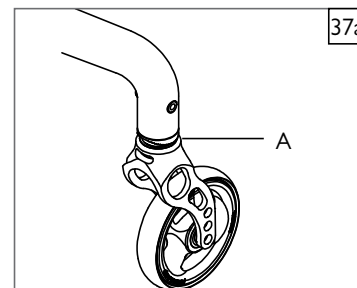


## IX. DEALER SERVICE & ADJUSTMENT

### 4. Correcting a Pull to the Right or Left 36 37a


Determine which direction the chair is pulling (right or left). Make the following adjustments to the caster on that side of the chair:

- Loosen the screw (D) (Fig. 36) inside the caster tube using a special 6mm Allen wrench.
- Loosen the screw (A) on the upper spline (Fig. 37a).
- Rotate the upper spline to turn the caster fork toward the forward driving direction. Turn the ring clockwise, and the fork will swing outwards. Turn the ring counterclockwise, and the fork will swing inwards.
- When the caster fork is correctly rotated forward, retighten the screws.
- After making the desired adjustment, recheck the squareness of the casters. (See "Checking for Caster Squareness" in Section G).




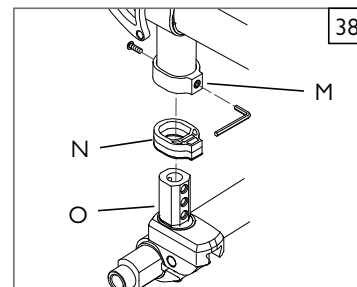
### H. CASTER FORKS 37

Three-hole caster forks allow the interchanging of some caster wheels and height adjustment when adjusting seat height. To adjust, loosen the bolt and remove the caster wheel. Change the caster size and/or position of the caster upward or downward in pre-drilled holes (1/2-in (12.7 mm) apart) on caster fork. Replace bolt and tighten securely.

Use a torque setting of 4.5 Nm [40 in-lbs] when adjusting the caster forks. 

### I. ADJUSTING REAR SEAT HEIGHT 38

Remove the set screws (M) on both sides of the axle plate. To increase the Seat To Floor Height add a spacer (N) to the camber tube clamp (O). To reduce the Seat To Floor Height remove the spacer (N) from the camber tube clamp (O). No more than two spacers per side are to be used. Once complete insert the camber system (O) in the axle plate and tighten screws (M) to 7 Nm [62 in-lbs]. 




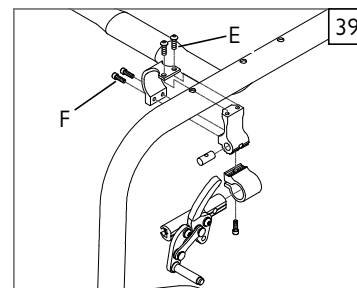
### J. WHEEL LOCKS

Zippie ZONE Adjustable and Zippie ZONE Active Rigid wheelchairs are shipped with one of five types of wheel locks. Wheel locks are installed at the factory unless you have requested otherwise.


Use a torque setting of 7 Nm [62 in-lbs] when setting up wheel locks. 

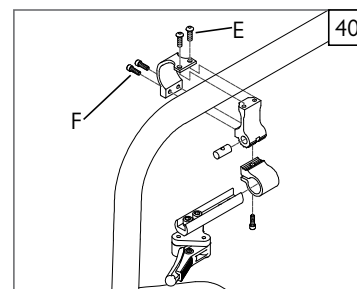
#### 1. High-Mount Push-to-Lock or Pull-to-Lock Wheel Locks Adjustment 39

- Using a 3mm Allen wrench, loosen both side screws (F). Then turn one of the top screws (E) in the clamp counterclockwise one-quarter turn.
- Repeat the same process with the remaining screws (E & F).
- Alternately loosen the screws (two turns each) until all screws are removed.
- Slide clamp toward the rear wheel until the wheel lock is embedded into the tire to prevent wheel movement, when in the locked position.
- Retighten the top screws (E) first, followed by the side screws (F). Tighten screws to 7 Nm [62 in-lbs]. 



#### 2. Compact Wheel Locks 40


- Using a 3mm Allen wrench, turn one of the screws (E) in the clamp counterclockwise one-quarter turn.
- Repeat the same process with the remaining three screws (E & F).
- Alternately loosen the screws (two turns each) until all four screws are removed.
- Slide clamp toward the rear wheel until the wheel lock is embedded into the tire to prevent wheel movement, when in the locked position.
- Adjust angle position.
- Tighten screws to 7 Nm [62 in-lbs]. 

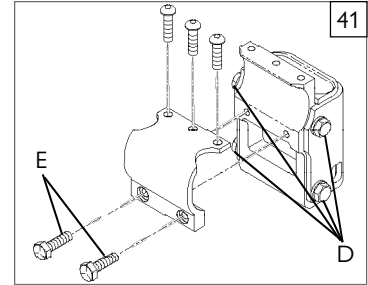



**NOTE** – Clamp and wheel lock may need to be rotated to clear frame tubing.

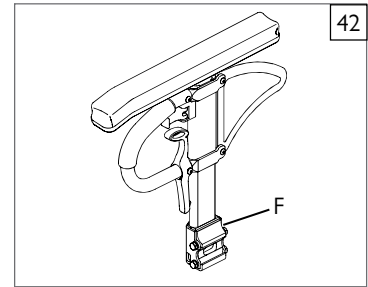
**K. ARMREST RECEIVER ATTACHMENT** 41 42**Adjusting Armrest Receiver Fit**

To tighten or loosen the fit of the outer armrest in the receiver:

1. Loosen the four receiver adjustment bolts (D) on the sides of the receiver.
2. With the armrest in the receiver (F), squeeze the receiver to achieve the desired fit.
3. Tighten the four bolts (D) to 16.3 Nm [144 in-lbs]. 

**Position Adjustment**

1. Loosen the two clamp bolts (E) until clamp is loose.
2. Slide armrest receiver to desired position.
3. Tighten both bolts to 7 Nm [62 in-lbs]. 


**L. FOOTREST HEIGHT ADJUSTMENT** 43 44 45

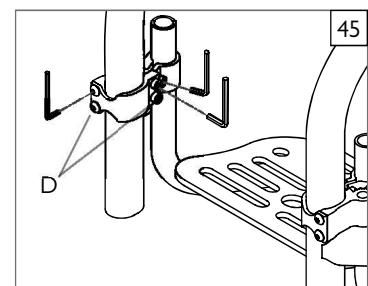
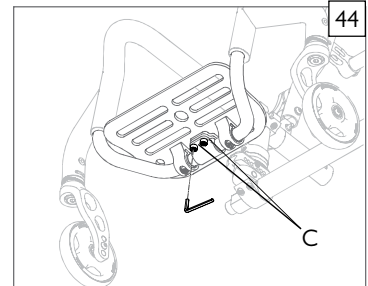
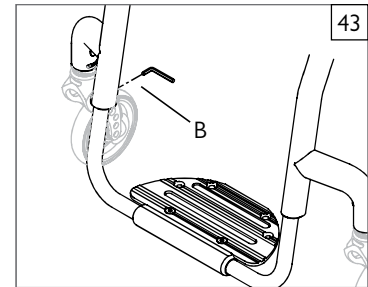
To adjust the height of your footrest, loosen the screw (B) on both footrest clamps. Slide the footrest up or down to the new desired height and tighten the two set screws. Use a MAX torque setting of 7 Nm [62 in-lbs.]. (Frame damage may occur if overtightened.) It is recommended that you maintain a minimum of 2.0 inches (51 mm) between the lowest point on the footrest and the floor. This will provide adequate clearance for uneven surfaces and prevent damage to your footrest.

**Flip-up Footrest**

To adjust the angle of the Flip-up Footrest, loosen two bolts (C) and rotate the footrest angle stop bracket. Once positioned, retighten bolts (C) to 10.4 Nm [92 in-lbs.]. For certain narrow widths, only one bolt will be present.

**High Mount Footrest Mount**

1. Loosen all four socket heads (D) on both sides of the chair.
1. Slide footrest to desired height.
2. Tighten socket to 7 Nm [62 in-lbs] on both sides. 



## X. SUNRISE LIMITED WARRANTY

### A. FOR LIFETIME

1. Although the anticipated useful service time of this wheelchair is five years, Sunrise Medical guarantees the frame against defects in material and workmanship for life or for as long as the original purchaser owns the chair.
2. This warranty does not apply if:
  - a. The chair is subject to abuse.
  - b. The chair is not maintained as recommended in the owner's manual.

### B. FOR ONE (1) YEAR

We warrant all Sunrise-made parts and components of this wheelchair against defects in materials and workmanship for one year from the date of first consumer purchase.

#### **Backrest Tension Adjustable** (Balistic & 3DX Vented)

Each Backrest Tension Adjustable is carefully inspected and tested to provide peak performance. Every Backrest Tension Adjustable is guaranteed to be free from defects in materials and workmanship for a period of twelve months from the date of purchase, provided normal use. Should a defect in materials or workmanship occur within twelve months from the original date of purchase, Sunrise Medical will, at its option, repair or replace it without charge. This warranty does not apply to puncture, tears, or burns.

Claims and repairs should be processed through the nearest authorized dealer. Expect for express warranties made herein, all other warranties including implied warranties of merchantability and warranties of fitness for particular purpose are excluded. There are not warranties which extend beyond the description of the face hereof. Remedies for breach of express warranties herein are limited to repair or replacement of the goods. In no event shall damages for breach of any warranty include any consequential damages or exceed to the cost of non-conforming goods sold.

### C. LIMITATIONS

1. We do not warrant:
  - a. Tires and tubes, upholstery, pads, and push-handle grips.
  - b. Damage from neglect, accident, misuse, or from improper installation or repair.
  - c. Products modified without Sunrise Medical's express written consent.
  - d. Damage from exceeding the weight limit.
2. This warranty is VOID if the original chair serial number tag is removed or altered.
3. This warranty applies in the USA and Canada only. Check with your supplier to find out if international warranties apply.
4. This warranty is not transferable and only applies to the first consumer purchase of this wheelchair through a Sunrise Medical authorized dealer.

### D. WHAT WE WILL DO

Our sole liability is to repair or replace covered parts. This is the exclusive remedy for consequential damages.

### E. WHAT YOU / DEALER MUST DO

1. Obtain from an Authorized Dealer, while the warranty is in effect, prior approval for return and/or repair of covered parts.
2. Return the wheelchair or part(s), freight pre-paid to the designated Sunrise Medical location.
3. Pay the cost of labor to repair, remove, or install parts.

### F. NOTICE TO CONSUMER

1. If allowed by law, this warranty is in place of any other warranty (written or oral, express or implied, including a warranty of merchantability, or fitness for a particular purpose).
2. This warranty gives you certain legal rights. You may also have other rights that vary from state to state or province to province.

### G. ADDITIONAL WARRANTY INFORMATION FOR AUSTRALIA ONLY

For goods provided by Sunrise Medical Pty Ltd in Australia, our goods come with a guarantee by Sunrise that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits to you given by this warranty are in addition to your other rights and remedies under a law in relation to the goods to which the warranty relates.

Record your serial number here for future reference:

---

(Serial number label is located on the back side of the cross tube, under the sling.)

Sunrise Medical S.r.l.  
Via Riva, 20 – Montale  
29122 Piacenza  
Italia  
Tel.: +39 0523 573111  
www.SunriseMedical.it

Sunrise Medical AG  
Erlenauweg 17  
CH-3110 Münsingen  
Schweiz/Suisse/Svizzera  
Tel +41 (0)31 958 3838  
www.SunriseMedical.ch

Sunrise Medical AS  
Delitoppen 3  
1540 Vestby  
Norge  
Telefon: +47 66 96 38 00  
post@sunrisemedical.no  
www.SunriseMedical.no

Sunrise Medical AB  
Neogatan 5  
431 53 Mölndal  
Sweden  
Tel.: +46 (0)31 748 37 00  
post@sunrisemedical.se  
www.SunriseMedical.se

MEDICCO s.r.o.  
H – Park, Heršpická 1013/11d,  
639 00 Brno  
Czech Republic  
Tel.: (+420) 547 250 955  
Fax: (+420) 547 250 956  
www.medicco.cz  
info@medicco.cz  
Bezplatná linka 800 900 809

Sunrise Medical Aps  
Mårkærvej 5-9  
2630 Taastrup  
Denmark  
+45 70 22 43 49  
info@sunrisemedical.dk  
www.SunriseMedical.dk

Sunrise Medical Australia  
11 Daniel Street  
Wetherill Park NSW 2164  
Australia  
Ph: +61 2 9678 6600  
Email: enquiries@sunrisemedical.com.au  
www.SunriseMedical.com.au

Sunrise Medical (US) LLC  
North American Headquarters  
12002 Volunteer Blvd.  
Mount Juliet, TN 37122, USA  
Tel: 1-800-333-4000  
Fax: 1-800-300-7502  
www.SunriseMedical.com



© 2025 Sunrise Medical (US) LLC  
116100 Rev. F

Sunrise Medical GmbH  
Kahlbachring 2-4  
D-69254 Malsch  
Deutschland  
Tel.: +49 (0) 7253/980-0  
Fax: +49 (0) 7253/980-222  
www.SunriseMedical.de

Sunrise Medical Ltd.  
Thorns Road  
Brierley Hill  
West Midlands  
DY5 2LD  
England  
Phone: 0845 605 66 88  
Fax: 0845 605 66 89  
www.SunriseMedical.co.uk

Sunrise Medical S.L.  
Polígono Bakiola, 41  
48498 Arrankudiaga – Vizcaya  
España  
Tel.: +34 (0) 902142434  
Fax: +34 (0) 946481575  
www.SunriseMedical.es

Sunrise Medical Poland  
Sp. z o.o.  
ul. Elektronowa 6,  
94-103 Łódź  
Polska  
Telefon: + 48 42 275 83 38  
Fax: + 48 42 209 35 23  
E-mail: pl@sunrisemedical.de  
www.Sunrise-Medical.pl

Sunrise Medical B.V.  
Defensiedok 20  
3433 NE Nieuwegein  
The Netherlands  
T: +31 (0)30 – 60 82 100  
F: +31 (0)30 – 60 55 880  
E: info@sunrisemedical.nl  
www.SunriseMedical.nl

Sunrise Medical HCM B.V.  
Vossenbeemd 104  
5705 CL Helmond  
The Netherlands  
T: +31 (0)492 593 888  
E: customerservice@sunrisemedical.nl  
www.SunriseMedical.nl  
www.SunriseMedical.eu (International)

Sunrise Medical S.A.S  
ZAC de la Vrillonnerie  
17 Rue Mickaël Faraday  
37170 Chambray-Lès-Tours  
Tel : + 33 (0) 2 47 55 44 00  
Email: info@sunrisemedical.fr  
www.SunriseMedical.fr

Sunrise Medical Canada Inc.  
1000 Creditstone Rd., Unit #2  
Concord, ON, L4K 4P8  
Canada  
Phone: 1-800-263-3390  
Fax: 1-800-561-5834  
www.SunriseMedical.ca