

# **The All Terraine Jackdrive Wheelchair Town N Country Plus owner/user manual**

## **(Herein referred to as Jackdrive Wheelchair TNC+)**

**The Town N Country Plus (TNC +) with knobby pneumatic tires injected with puncture resistant tire sealant, plus the detachable, quick release 12" diameter knobby pneumatic puncture resistant**

**FreeWheel, 5th wheel attachment. Can be used on both Firm, Even Surfaces such as Pavement, Asphalt, Concrete and Indoor Floors and Carpets. Also capable of Traversing Grass, Gravel, Hiking Trails, Hard Packed Sand, Hard Packed Snow and Ice all the while providing a smooth ride while traversing rough terrain.**

**WE STRONGLY ADVISE READ THROUGH THE ENTIRE OWNER/USER/OPERATIONS MANUAL CAREFULLY AND THOROUGHLY FAMILIARIZING YOURSELF WITH EVERY STEP/ASPECT BEFORE TAKING YOUR FIRST RIDE.**

### **FAILURE TO DO SO COULD RESULT IN INJURY OR DEATH.**

**The overall maximum weight capacity for the Jackdrive Wheelchair TNC+ is not to exceed 250 Lbs./113.4 Kilos for the combined gross weight of rider and items carried.**

#### **WARNING. WHEELCHAIR USERS:**

- Do not have anyone service or operate the Jackdrive Wheelchair TNC+ without first reading and understanding the Owner/User Manual.
- If you or they are unable to understand the instructions, warnings or cautions contained within these manuals, contact Jackdrive Customer Service at 919-257-1195, PRIOR to operating or servicing the Jackdrive Wheelchair TNC+; otherwise injury to the operator or damage to the equipment may result.

#### **ONCE YOU RECEIVE YOUR SHIPMENT:**

- We recommend you have another person or persons assist you through this entire beginning process.
- After you receive your Jackdrive Wheelchair TNC+ delivery; check the box and the wheelchair for any visible signs of damage from shipping.

#### **SHORTAGES AND SHIPPING DAMAGE:**

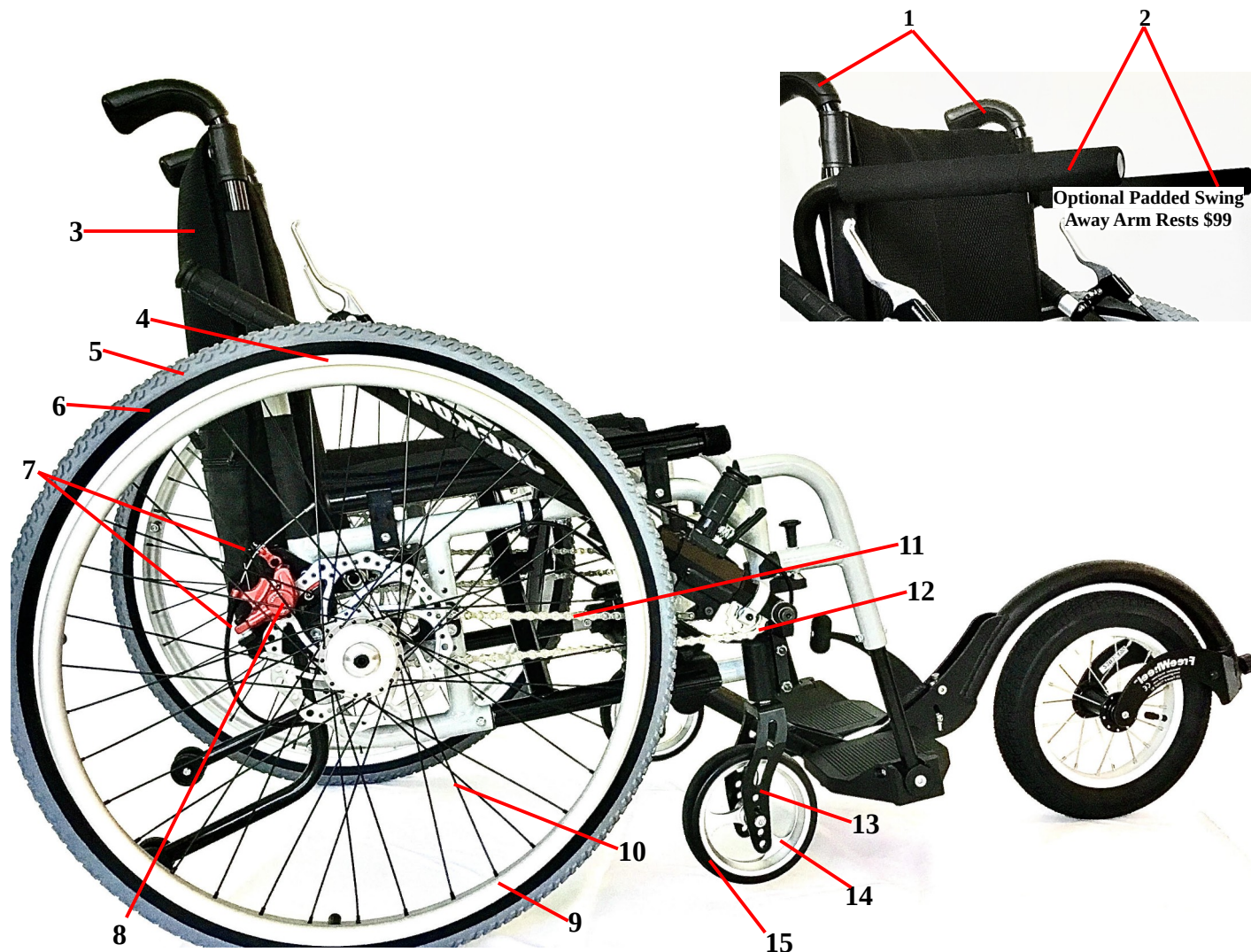
Inspect your delivery immediately upon receipt:

- Check to make sure there is no damages to the shipping container, damages to the wheelchair or missing parts.
- Damaged merchandise must be retained in the original shipping carton and reported to the carrier and the manufacturer immediately.
- Contact manufacturer of Jackdrive Wheelchair immediately at 919-257-1195 if there are any signs of damage or shortages.
- Claims for damages, shortages and shipping must be made within 10 calendar days of receipt of merchandise.

#### **RETURNS: NOTE: Claims made after 10 days of receipt of the merchandise will not be honored.**

- You have up to 10 calendar days from receipt of merchandise to return the Jackdrive Wheelchair TNC+.
- A 15% restock fee will be charged, even when returned within the first 10 days of ownership on all returns.
- Refunds are issued after merchandise is inspected and found to be:
  - a. In unaltered, undamaged, unused condition.
  - b. In it's original factory settings.
  - c. In its original shipping carton.
- Returns will not be accepted:
  - a. If the original chair serial number tag is removed or altered.
- The customer will bear the cost of return shipping.

**NOTE** Customized Jackdrive Wheelchairs TNC+ are not available for returns and/or refunds.



1. Push Handle Back Cane

2. Optional Detachable Padded  
Swing Away Armrests \$99

3. Height Adjustable Seat Back With  
Zippered Rear Storage Compartment

4. 24" Aluminum Wheels

5. Primo VTrak Pneumatic Knobby Tires

6. Puncture Resistant Heavy Duty  
Pneumatic Tire Tube

7. Brake Caliper Set Screw

8. Brake calipers

9. Aluminum Push Rims

10. Black Stainless Steel Spokes

11. Drive Chain

12. Drive Chain Sprocket Guide

13. Front Caster Fork

14. Height Adjustable Front  
Caster Wheels

15. 6" Soft Roll Front Caster



**Detachable Waterproof Side Panels  
With 2 Side Pockets  
Provides Protection from Dirt,  
Water, Debris.  
Sold as A Pair \$89.00**



**1. Locking Hand Brake Levers**

**2. Hand Brake Locking Pin**

**3. Adjustable Hand Brake Set Screw**

**4. Jack handles aka Push Levers  
with Tensioner Spring Inside**

**5. Brake Cable**

**6. Seat Sling**

**7. Detachable Swingaway Leg/Foot Rest**

**8. Swing-Away Leg/Foot Rest**

**Lever/Locking Mechanism**

**9. FreeWheel Folding Wheelchair  
Attachment**

**10. FreeWheel Locking/Unlocking  
Control Lever**

**11. Folding Foot Plates**

**(Height and Angle Adjustable)**

**12. FreeWheel Attachment with Puncture**

**Resistant 12" Pneumatic Tire**

**13. Shifter Grip**

**14. Shifter Trigger & Spring**

**15. Leverage Points for Shifting Gears**

**16. Brake Roter**

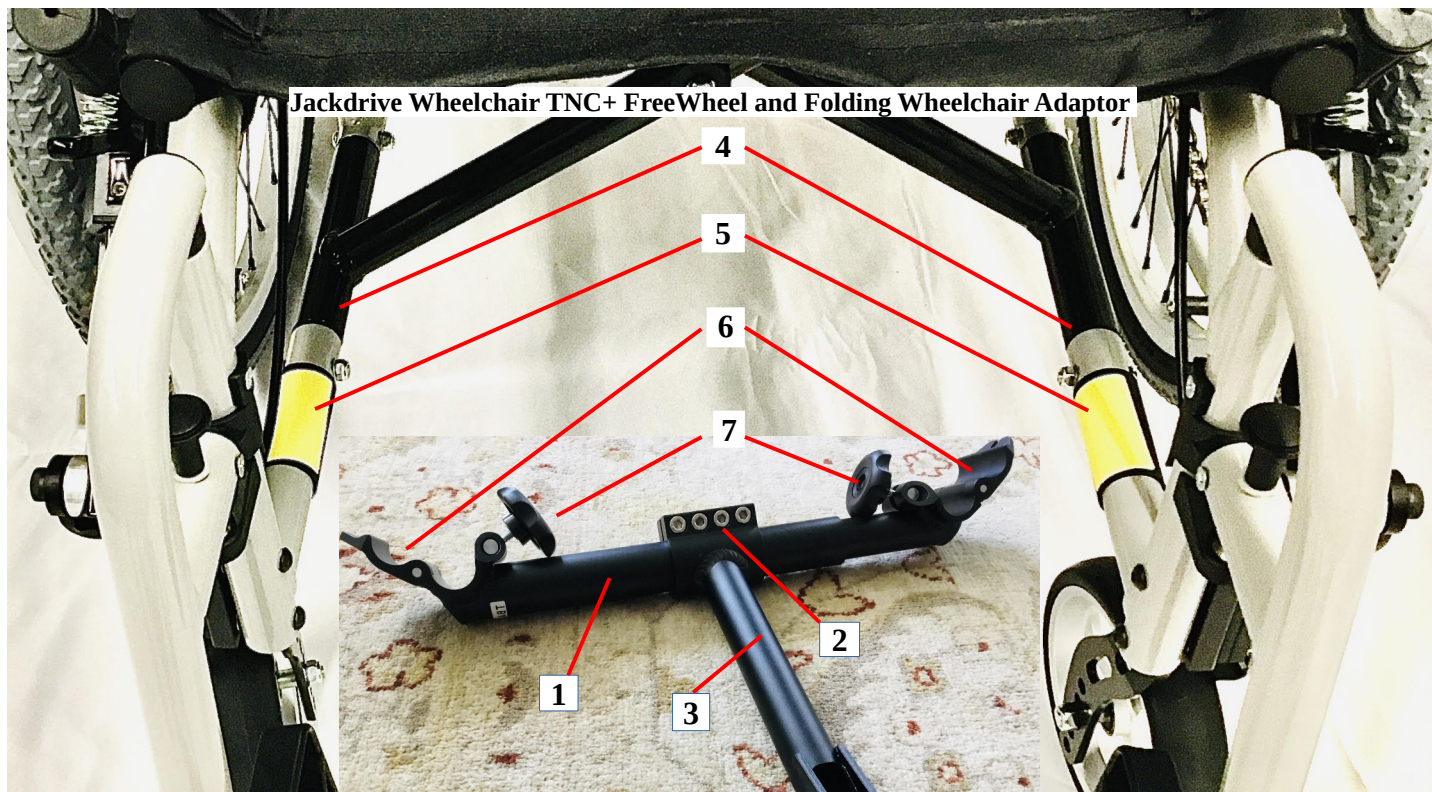
**17. Rear Axle, Axle Sleeve, Axle Plate,  
Axle Nut**

**18. Jackdrive Proprietary Hub**

**19. Factory Installed Anti-Tip Tubes**

**20. Folding Frame With Cross Brace**





**1. Folding wheelchair Adapter Bar**

**2. Hitch Screws**

**3. Hitch**

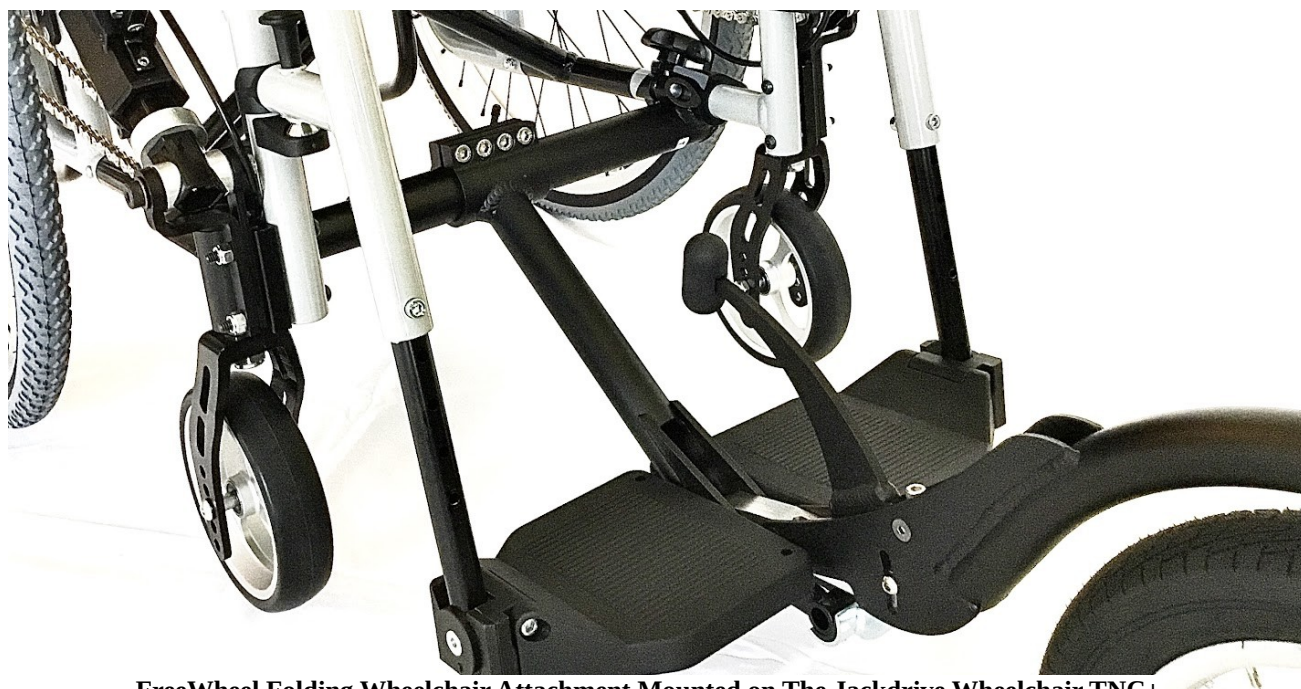
**4. JackdriveWheelchair Side Tubing**

**5. Tube Shims (Highlighted in Yellow)**

**6. Side Tube Clamps**

**7. Tube Shim Clamping Knobs**

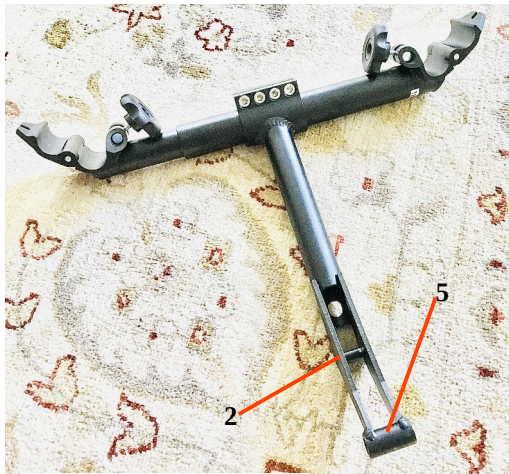
- The FreeWheel Folding Wheelchair Adaptor Arrives Custom Fitted and Ready to Attach to Your Jackdrive TNC+
- With the Chair on a Flat, Even Surface, Securely Lock Both Brake Levers
- Attach and Close #6 Around The Side Tube Clamps #5 (The Tube Shims on Your Chair Highlighted in Yellow)
- Lift #7 The Tube Shim Clamping Knobs Into The Slot and Turn to Tighten
- Repeat with The Other Side. Make Sure Both Sides are Securely Locked In Place and Tightened



**FreeWheel Folding Wheelchair Attachment Mounted on The Jackdrive Wheelchair TNC+**



**How to Attach The FreeWheel to The Folding Wheelchair Adaptor**  
 (After the Folding Wheelchair Adaptor is Securly Attached to The Jackdrive Wheelchair)  
 Open #3 FreeWheel Locking/Unlocking Control Lever to The widest Position  
 Insert #1 FreeWheel Hitch Hook in to #2 Hitch Hook Receiver  
 Align #4 Cup Shim to #5 Cup Shim Receiver  
 Pull The Knob on #3 Towards The Rider and Push Down to Locking Position.



1. FreeWheel Hitch Hook  
 2. Hitch Hook Receiver



3. Freewheel Locking/Unlocking Control Lever: Shown Here Unlocked Position  
 4. Cup Shim Clamp 5. Cup Shim Clamp Receiver



Detailed View From Side with #3 Control Lever and Cup Shim Locked in Place .



Detailed View from Top with #3 Control Lever Locked in Place



View of FreeWheel Folding Wheelchair Attachment with FreeWheel in Forward Facing Mounting Position



View of FreeWheel Folding Wheelchair Attachment with FreeWheel in Riding Position





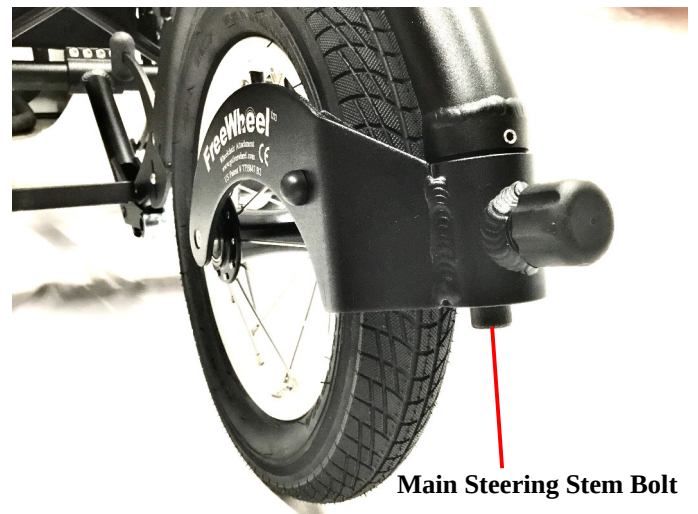
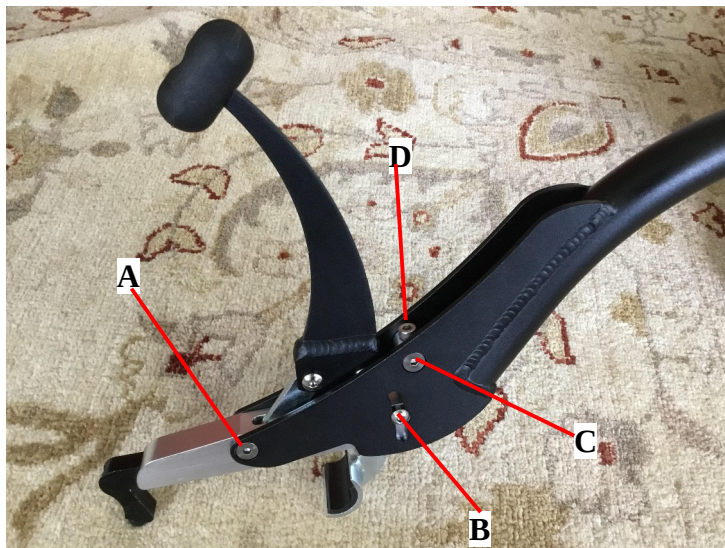
**FreeWheel Attached to Jackdrive TNC+ with The FreeWheel in Forward Facing Mounting Position**



**Rotate both Left and Right Pushrims in Opposite Directions to Maneuver The FreeWheel Backwards into The Riding Position**



**Jackdrive TNC+ in Ready to Ride Position**



## MAINTAINING YOUR FREEWHEEL ATTACHMENT

**NOTE:** It is important to maintain your FreeWheel Attachment so it continues to provide you with years of enjoyment.

It is a good habit that on a regular basis, especially after a long work out, that you check the following:

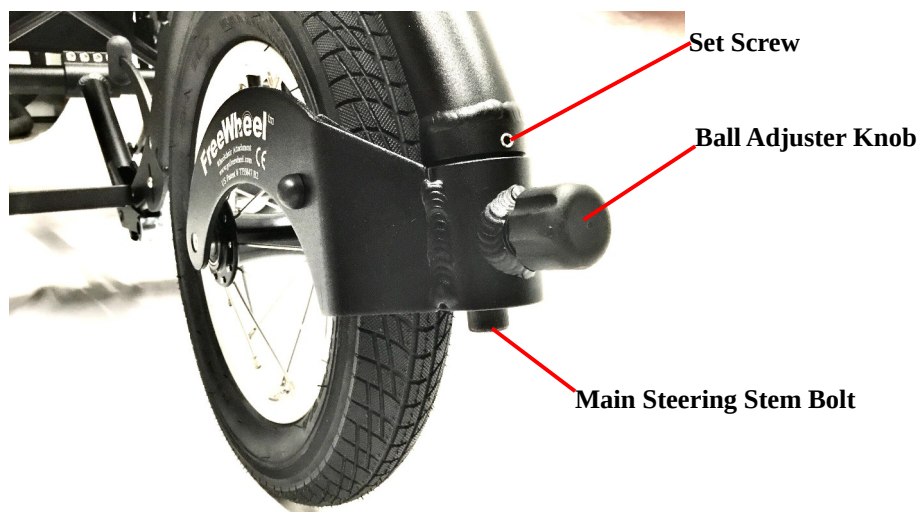
1. Keep screws A, B and C tight using 5/32" or 4mm Allen wrench and double checking both sides.
2. Make sure the Angle Adjust bolt D is in contact with the silver barrel (adjust with 3/16" or 5 mm Allen wrench). You should NOT be able to see any of the Angle Adjust bolt threads
3. CRITICAL- Make sure the Main Steering Stem Bolt is tight. In some cases this bolt will loosen and the FreeWheel will not function properly. Using an 8mm allen torque wrench tighten to 20 ft. lbs. torque. It is important that you use a torque wrench to make sure this is properly tightened.
4. Please keep your Freewheel free of dirt, mud and grim, as well as immediately wash off any saltwater should you be near the ocean.
5. Occasionally you may want to put bearing grease on the ball bearing under the front knob (and under the spring). Please do not hesitate to contact us if you have any issues. Our goal is to make sure your Jackdrive Wheelchair TNC+ with the FreeWheel attachment is always functioning safely and properly.

## **FREEWHEEL ATTACHMENT STEERING ADJUSTMENT**

### **How to Adjust for Steering:**

If your Freewheel is not tracking straight when coasting forward on level ground, the steering should be adjusted. To do this you need to adjust two separate fasteners: Front Set Screw, and; Main Steering Stem Bolt

1. The Front Set Screw secures the steering adjustment.
2. After loosening the Front Set Screw (2.5mm Allen wrench) and Main Steering Stem Bolt (8mm Allen wrench), rotate the fork to adjust the steering straight. It helps to rotate the tire under the frame 360° clockwise and counterclockwise, to loosen up the internal mechanism.
3. If the internal bushing is not rotating relative to the frame, then tighten the Ball Adjuster Knob to lock the fork to the internal bushing. Work the bushing loose from the frame. Re-grease this joint by inserting bearing grease under the spring, on the ball bearing, to keep it from binding.
4. Set the steering and then tighten the Front Set Screw.
5. Finish by tightening the Main Steering Stem Bolt. It is IMPORTANT this bolt is tightened to 20 ft. lbs. with a torque wrench to avoid damaging your FreeWheel.
6. Test for straightness by coasting on a flat/level surface. Note: The front ball adjuster knob can be loosened for light steering action or screwed in (tightened) for heavier steering action.





## **DIMENSIONS:**

### **Seat Width Size 16 Inch Model:**

Overall Length: Jackdrive Wheelchair **Without** Freewheel Attachment 36.5 inches.

Overall Length **With** Detachable Freewheel Attachment: 59"

Overall Width Unfolded: 26.5 inches.

Overall Height: Adjustable 32-38 inches.

Overall Width Folded: 14 inches.

Floor to Seat Height:

Front: 17-19 inches. Adjustable.

Rear: 15-18 inches. Adjustable.

Seat Width: 16 inches.

Seat Depth: 17 inches

Maximum Overall Weight Capacity: 250 Lbs./113.4 Kilos for the combined weight of rider and items carried.

Chair Weight: 37 Lbs. (**Without** The FreeWheel Attachments)

### **Seat Width Size 18 Inch Model:**

Overall Length: Jackdrive Wheelchair **Without** Freewheel Attachment 36.5 inches.

Overall Length **With** Detachable Freewheel Attachment: 59"

Overall Width Unfolded: 28.5 inches.

Overall Height: Adjustable 32-38 inches.

Overall Width Folded: 14 inches.

Floor to Seat Height:

Front: 17-19 inches. Adjustable.

Rear: 15-18 inches. Adjustable.

Seat Width: 18 inches.

Seat Depth: 17 inches

Maximum Overall Weight Capacity: 250 Lbs./113.4 Kilos for the combined weight of rider and items carried.

Chair Weight: 37 Lbs. (**Without** The FreeWheel Attachments)

### **Seat Width Size 20 Inch Model:**

Overall Length: Jackdrive Wheelchair **Without** Freewheel Attachment 36.5 inches.

Overall Length **With** Detachable Freewheel Attachment: 59"

Overall Width Unfolded: 30.5 inches.

Overall Height: Adjustable 32-38 inches.

Overall Width Folded: 14 inches.

Floor to Seat Height:

Front: 17-19 inches. Adjustable.

Rear: 15-18 inches. Adjustable.

Seat Width: 20 inches.

Seat Depth: 17 inches

Maximum Overall Weight Capacity: 250 Lbs./113.4 Kilos for the combined weight of rider and items carried.

Chair Weight: 37 Lbs. (**Without** The FreeWheel Attachments)

Frame Material: Aluminum. Foot Rest: Composite. Footplate Height & Angle Adjustable. Seat Back Height Adjustable.

Rear Wheel Height Adjustable: +/-4 inches

**Open the Box:** Take the Jackdrive Wheelchair TNC+ out of the box. This might require assistance of another person or persons.

## UNFOLDING AND FOLDING THE CHAIR. WARNING:

**Be careful of possible pinch points!**

**WARNING:** Do not wrap fingers around the seat rail while opening/unfolding the chair!

### 1. Unfolding the chair:

- a. With the parking brakes on, push down with open palm on one side of the seat rail while holding and lifting upward and outward the push rim on the same side.

IF YOU HAVE TENSION ADJUSTABLE UPHOLSTERY:

Loosen straps or remove upholstery prior to folding and unfolding the chair.

**NOTE: CAREFUL NOT TO PINCH THE BRAKE CABLE BETWEEN THE SEAT AND FRAME while unfolding.**

### 2. Folding the chair:

- a. With the brakes on, place hands centered under the front and back of the seat sling.
- b. Lift the seat up until it is in the folded position.

**WARNING:**

- Jackdrive recommends using the factory installed “anti-tip devices”
- The mechanical advantage provided by the lever drive propulsion system makes it very easy for the front wheels to lift up and loose contact with the riding surface AKA “pop a wheelie” and could result in the wheelchair overturning if used without anti-tip devices.

## INSTALLING/UNINSTALLING THE DETACHABLE SWING AWAY LEG/FOOT-RESTS:

**NOTE:** The detachable swing away leg/footrests will arrive separately inside your wheelchair shipment.

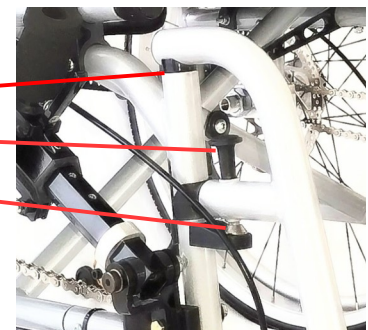
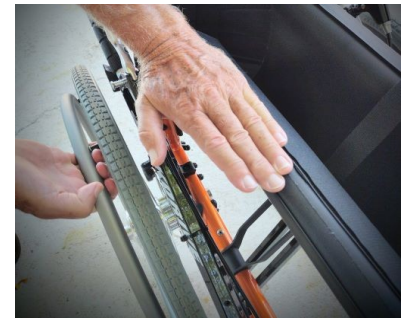
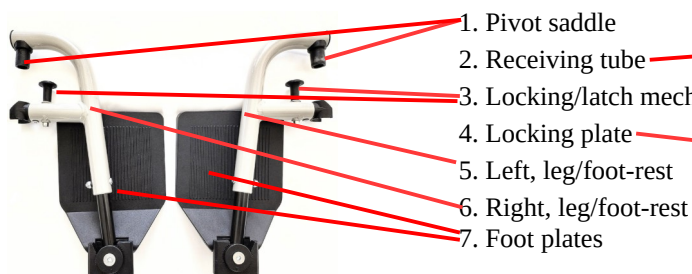
**WARNING:** Make sure that you have had your leg/foot-rest correctly adjusted by your authorized ATP under the advice of your health care advisor to help you choose the best set-up and options for safe use. The footrest position is key to keeping your body in proper alignment, and providing a stable support for your legs and torso. Leg/foot-rests should be swung out of the way, or removed for transfers.

### 1. Basic Leg/Foot-rest Installation

- a. Unfold the chair.
- b. Place swing-in/swing-out pivot saddle (1) into the receiving tube (2) at the front of frame tube with the foot-plates facing forward.
- c. Insert the leg/foot-rest pivot saddle downwards into the receiving tube while rotating inwards towards the center of the chair till the locking/latch mechanism (3) is securely locked in place in the locking plates (4). Unfold the foot plates (7).

### 2. Removing Leg/Foot-Rest

- a. Fold the foot plates (7), release the locking/latch mechanism (3) by pulling them upwards out of the locking plate (4).
- b. Rotate leg/foot-rest outwards, lifting them up, out of the receiving tube.





**WARNING: Before you begin; find a SAFE, OPEN, SMOOTH, FLAT, FIRM and DRY surface.**

**Surfaces and surface conditions not recommended for practice riding the Jackdrive Wheelchair TNC+ Include but are not limited to;**

(Rocks, gravel, grass, sand, snow, roads, dirt roads, streets, inclines, hills, ramps, ETC...)

1. Unfold the Jackdrive Wheelchair TNC+
2. Sit comfortably in the seat as you would a regular wheelchair.
3. Unfold the foot plates.

**NOTE: Jackdrive Wheelchair recommends adjusting the seat back height to achieve maximum comfort and support to allow the rider to take full advantage of the benefits of the Jackdrive Propulsion System.**

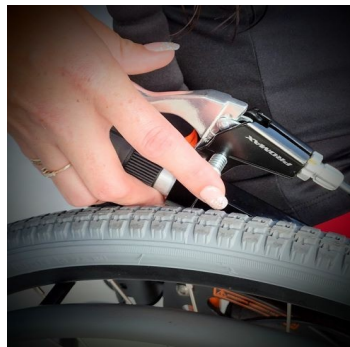
#### **Adjusting The Hand Brakes:**

1. Every Jackdrive Wheelchair TNC+ will arrive with the hand brakes in the unlocked position. Initially you may need to adjust the cable tension to suit your grip with the set screws on the hand brakes and/or at the brake calipers.
2. All Jackdrive Wheelchairs TNC+ are adjustable to your personal configurations. You must have the work done by a trained service professional under the advice of a healthcare advisor.

**NOTE. Jackdrive Wheelchairs are the only wheelchair manufactured with these unique hand brakes. They are used for both stopping, steering and parking.**

**WARNING:** Before using the chair for the first time familiarize yourself with the hand brake operation by locking and unlocking the hand brakes.

1. To lock the hand brakes while sitting in the chair:
  - a. Place both the push levers AKA Jack handles in the Jack handle rest.
  - b. Press both the brake levers down with your palms until you can push both the locking mechanisms in place with your index fingers, slowly release the hand brake levers, making sure the brakes are firmly engaged and the chair is secure.
2. Releasing the hand brakes while sitting in the chair
  - a. Unlock the brakes by reaching back with both arms and pushing down on the brake levers with your palms.
  - b. When both brake mechanisms pop out of place then the brakes are disengaged.



**CAUTION: When sitting in your Jackdrive Wheelchair TNC+ for the first time or anytime, always make sure the parking breaks are LOCKED and the chair is SECURE.**

#### **DRIVING WITH THE PUSH-RIMS. WARNING:**

1. **CAUTION:** First familiarize yourself with the Jackdrive Wheelchair TNC+ by using the PUSH-RIMS ONLY.
  - a. You can use the push rims at anytime as you would a regular wheelchair after you return the Jack handles back in the Jack handle rests.
  - b. The push rims must be used to reverse direction and for very tight quarters, bathrooms etc. the same way an everyday wheelchair is used.

**WARNING:** If you experience any resistance while reversing using the push rims, **DO NOT** force the wheelchair backwards as this may cause damage to the Jackdrive Propulsion System, carefully use the push rims to first roll slowly forward before using your hands to lightly lift up the Jack handles, propel forward one stroke until the mechanisms in the hubs are cleared and then try reversing again.

#### **ENGAGING THE JACK HANDLES. WARNING:**

Before lifting or engaging the Jack handles, the arm rests must be swung out of the way facing the back of the chair in the locked position or removed.

1. All Jackdrive Wheelchair TNC+ arrives in the lowest gear. Make sure **both shifters** on the Jack handles are set in the lowest gear.
2. Disengage the breaks.
3. ALWAYS begin by using both push-rims to propel yourself slowly and carefully straight forward.
  - a. This action allows the Jack handles to be easily lifted up out of the Jack handle rests as you lift them up.
4. Lift both Jack handles by the Jack handle grips with your fingers while rotating your hands around until both Jack handle grips are resting in your palms, with your palms facing forward.
5. Smoothly push the Jack handles forward using the Jack handle grips with your fingers open handed gently touching the hand brake levers, making sure your fingers are in contact with the hand brakes at all times.

**NOTE:** Do not tightly grasp the Jack handle grips, as the mechanism in the Jack handles will lightly hold them in place against your palms.

**WARNING:** Be cautious of moving parts, metal edges and other mechanisms that may cause injury

#### **DRIVING THE JACKDRIVE WHEELCHAIR TNC+ USING THE JACK HANDLES.**

**WARNING:** Always ride carefully at a safe speed.

1. Driving Forward:
  - a. The Jack handle grips should rest in your palms and your fingers should be gently cradling the hand brakes.
  - b. Do not tightly grip the handle grips or the hand breaks.
  - c. Forward motion is achieved by pushing both Jack handles with your palms against the handle grips and extending your arms forward using smooth short forward strokes, 8-12 inches, just before the elbow locking position; arms slightly bent.
2. Resting/back stroke:
  - a. The Jack handles will effortlessly recoil backwards while resting against your palms and ready for the next power stroke forward.

**WARNING:** NEVER OVER EXTEND the Jack handles more than 3 inches beyond your knees as this could damage the drive mechanism.





**SHIFTING GEARS.** (or leverage points) **WARNING: Do not attempt to shift gears while on a slope, incline or hillside.**

**NOTE;** Jackdrive Wheelchair TNC+ arrives in first gear/the lowest gear: The gear/leverage point furthest down on the Jack handles. The easiest gear (the first gear) is for propelling yourself forward with relative ease. We advise you start with this gear until you get familiarized, comfortable and build up confidence and strength before shifting to the next gear.

### **1. TO SHIFT TO A HIGHER GEAR (Up shift);**

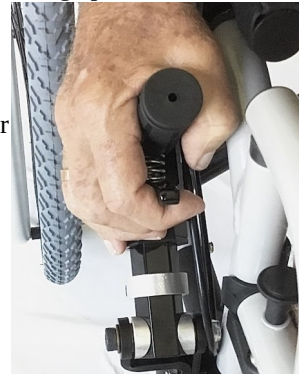
**NOTE** Shifting to a higher gear can be achieved either while stationary or moving slowly forward on a flat surface.

- a. Always place both the Jack handles back in the Jack handle rest in both hand brakes in the locking position.
- b. Reach down with both hands, squeezing both the shifter triggers and carefully move both shifters up to the next higher gear/leverage point on the Jack handles.
- c. Release the shifter triggers making sure both shifters are firmly locked in the same desired gear/leverage point.

### **2. TO SHIFT TO A LOWER GEAR (Down Shift); There are 2 different methods.**

#### **Method # 1 WHILE Carefully and Slowly ROLLING FORWARD**

- **NOTE;** YOU MUST be on a flat surface carefully/slowly rolling straight forward by coasting or by using the push-rims to propel yourself forward.
  - a. Place the Jack handles, unlocked, in the Jack handle rest.
  - b. Squeeze both shifter triggers and push both shifters down the Jack handles to the desired gear/leverage points to achieve a lower gear.



#### **TO SHIFT TO A LOWER GEAR WHILE STATIONARY**

#### **Method # 2 WHILE STATIONARY**

- **NOTE;** YOU MUST be stationary on a flat surface. You can only shift to a lower gear while stationary. You can only downshift one side at a time.
  - a. Unlock and lift the desired Jack handle (Push Lever) to a 90 degree vertical position.
  - b. Make sure to hold the hand brake lever while the other lever is in its rest with the brake lever locked.
  - c. With your other hand, grab and squeeze the shifter pushing downwards to shift to the desired lower gear. Place that Jack handle back in the Jack handle rest with the hand brake in the locked position.
  - d. Unlock the other Jack handle and repeat the above instructions a b c with the opposite Jack handle (push lever)
  - e. Make sure the shifters are set to the same gear on both Jack handles.



### **TURNING. WARNING:**

**WARNING!** Make turns only while moving at safe speed. Making turns at excessive speeds could cause the chair to tip over. Your fingers must be in constant contact with the hand brakes for steering and with a stronger grip for stopping as required.

#### **1. To MAKE A RIGHT TURN;**

- a. With the chair moving safely forward, while pushing the LEFT Jack handle forward, gently squeeze the RIGHT break.

#### **2. To MAKE A LEFT TURN;**

- a. With the chair moving safely forward, while pushing the RIGHT Jack handle forward, gently squeeze the LEFT break.

#### **3. TO MAKE A TIGHT TURN USING THE JACK HANDLES;**

- a. Simply hold the brake on the side you wish to turn while pushing the opposite Jack handle.
- b. To make an even tighter turn, place the Jack handles back into the Jack handle rests and use the push rims as you would a standard chair.

## **TO ENGAGE THE PARKING BRAKE. WARNING:**

**WARNING:** We strongly advise you initially adjust the cable tension to suit your grip with the set screws on the hand brakes and/or at the brake calipers. Consult your authorized ATP (Assistive Technology Professional) and your health care advisor to help you choose the best set-up and options for safe use.

**NOTE:** There are two different ways.

1. With the Jack handles upright in your hands:

- Squeeze the hand breaks levers tightly with your fingers until you can push both the locking mechanisms in place with your little finger, slowly release the hand brake levers, making sure the brakes are firmly engaged and the chair is secured. Lower the Jack handles and gently drop them back in the Jack handle rest.



2. With the Jack handles in the Jack handle rests

- Only while on a flat surface, lower the Jack handles and gently drop them back in the Jack handle rest. Press both the brake levers down with your palms until you can push both the locking mechanisms in place with your index fingers, slowly release the hand brake levers, making sure the brakes are firmly engaged and the chair is secured



3. REVERSE:

- After returning the Jack handles to the Jack Handle rests with the brakes disengaged, maneuver the Jackdrive Wheelchair TNC+ backwards using only the push rims as you would a regular wheelchair.

**WARNING: Instructions #2 and #3 should be performed only while on a flat surface.**

**WARNING: If you experience any resistance while reversing using the push rims, DO NOT force the wheelchair backwards as this may cause damage to the Jackdrive Propulsion System, carefully use the push rims to first roll slowly forward before using your hands to lightly lift up the jack handles, propel forward one stroke until the mechanisms in the hubs are cleared and then try reversing again.**



## **RAMPS, SLOPES AND SIDE-HILLS. WARNINGS:**

**WARNING.** We highly recommend against using the Jackdrive Propulsion System when traversing ramps, slopes and hill-sides. Ramps, slope and hillsides should be less than 6° or you may be at risk of a tip over. Always ride carefully at a safe speed.

**WARNING:** Whenever possible, avoid riding on a slope, which includes a ramp or side-hill. 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. When approaching a ramp, slope or hill-side.
  - a. First come to a complete stop on a flat surface.
  - b. Put both Jack handles back into the Jack handle rests with the brakes dis-engaged.
  - c. Use the push rims to traverse ramps, slopes and hill-sides as you would an ordinary wheelchair.
2. Be careful when navigating hills, slopes, ramps and hill-sides, and always operate under control.
  - a. Be specifically aware of the position of your body in the chair. Correct balance when navigating ramps, slopes and hill-sides may differ from conventional wheelchairs and may require the user to reposition themselves to avoid tipping.
3. Always ride carefully at a safe speed. Be careful of excessive speed and ride under control at all times, especially when going downhill.
  - a. Maintain proper braking pressure using both hand rims and control downhill speed at all times to avoid accidents

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

## **THE JACKDRIVE WHEELCHAIR TNC+ MANUAL AND SAFETY WARNINGS:**

The Jackdrive Wheelchair TNC+ provides a choice of many adjustments to meet the needs of the wheelchair rider. However, final selection of the type of options and adjustments rests solely with you and your trained service professional under the advice of your health care advisor.

Choosing the best 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 that will improve your positioning, your safety and comfort such as, positioning belts, or special seating systems.

## **REVIEW THIS MANUAL OFTEN:**

Before using this chair, you and each person who may assist you, should read this entire manual and make sure to follow all instructions. Review the warnings often, until they are second nature to you. If anything is unclear please contact Jackdrive Wheelchair LLC. at [info@jackdrivewheelchair.com](mailto:info@jackdrivewheelchair.com). Or call customer service @ 919-257-1195

## **SAFETY INFORMATION:**

As with standard wheelchairs, always use your Jackdrive Wheelchair TNC+ within the limits of your ability and in accordance with the manufacturer's specifications. Failure to do so may cause serious injury or death.

## **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 all main sections, as follows:

### **1. — 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.

## 2. — 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.

## 3. — WARNINGS — COMPONENTS & OPTIONS

Here you will learn about the components of your chair and options you can select for safety. Consult your authorized ATP and your health care advisor 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 this section. 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.

### **GENERAL WARNINGS:**

#### **WEIGHT LIMIT. WARNING:**

**NEVER** exceed the overall weight limit of 250 pounds (113.4 kg) for the combined weight of the rider and items carried.

If you do exceed the limit, damage to your chair, a fall, tip-over or loss of control may occur and cause severe injury to the rider and others.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **INTENDED USE. WARNING:**

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

1. The Jackdrive Wheelchair TNC+ is not designed for weight training and is unsafe for use as a seat while weight training.
  - a. 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. Use in trick riding, ramp riding, jumping, aggressive riding, riding on severe terrain, riding in severe climates, riding with heavy loads, racing, commercial activities and other types of nonstandard use of a JACKDRIVE WHEELCHAIR TNC+ is not covered by this warranty.
6. Unauthorized modifications and use of parts or accessories not supplied or approved by Jackdrive Wheelchair LLC. may change the chair structure.

**WARNING:** This will void the warranty and may cause a safety hazard. If the warning is ignored, damage to your chair, and the potential severe injury of the person using the chair for unintended purposes can occur.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **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 healthcare advisor, you will need to learn safe and proven body mechanics to use and create assistive methods best suited to your abilities.

- If anything is unclear please contact Jackdrive Wheelchair LLC. at [info@jackdrivewheelchair.com](mailto:info@jackdrivewheelchair.com)

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**



## **ACCESSORIES. WARNING:**

Unauthorized modifications or use of parts, or accessories not supplied or approved by Jackdrive Wheelchair LLC. may change the chair structure. This will void the warranty and may cause a safety hazard. The problems that may incur, but are not limited to are:

1.  
Incorrect wheels and/or tires, including incorrect tire pressure can put the rider at risk of a fall or tip over.

2. Adding a component to the frame will compromise the chairs integrity.
3. Changing the structural integrity of the chair in any way can put the rider at risk and cause damage to the chair.
4. 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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

## **KNOW YOUR CHAIR. WARNING:**

Every wheelchair is different. Take the time to learn the feel of your Jackdrive Wheelchair TNC+ before you begin riding. Start slowly, with smooth, easy 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.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

## **JACKDRIVE WHEELCHAIR TNC+ PUSH LEVERS (AKA Jack handles). WARNING:**

**WARNING! When performing a weight shift or a transfer, Jackdrive Wheelchair TNC+ users should never use the Jack handles as support.**

1. NEVER use the Jack handles as a transfer point.
  - a. Both the Jack handles must be placed back in the Jack handle rest with the brakes firmly engaged and the Jack handles out of the way to allow lateral transfers.
2. Before lifting or engaging the Jack handles, the arm rests must be swung out of the way facing the back of the chair in the locked position or removed.
3. NEVER lift this chair by the Jack handles. They may move while lifting causing injury and damage to the chair.
  - a. The Jack handles are used solely for the purpose of propelling the chair forward, making turns, steering and breaking.
4. Lift this chair only by the non-detachable parts of the frame with the parking brakes firmly engaged.

**CAUTION:** The Jack handles are not designed to be a transfer arm for the wheelchair. You should always placed the Jack handles in the Jack handle rest with the brakes firmly engaged and the Jack handles out of the way to allow lateral transfers. The Jack handles are not designed to be used for any activity that puts any body weight on them, such as transferring using the Jack handles. Failure to follow these instructions can result in severe injury, decreased chair integrity and may void the warranty.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

## **REDUCE THE RISK OF AN ACCIDENT. WARNING: Always ride carefully at a safe speed.**

1. BEFORE you begin riding, you should be trained in the safe use of this chair with your health care advisor.
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.
6. Use the factory installed anti-tip tubes until you are a skilled rider of this chair and are sure you are not at risk of a tip over.
7. Always ride carefully at a safe speed.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**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 loose fasteners, or damage to your chair).
2. Immediately repair any problem. Your trained service professional under the advice of your health care provider can help you find and correct the problem.
3. Always keep your factory installed anti-tip tubes locked in place. 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.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**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. Changes and/or adjustments should only be done by a trained service professional with the advice of a healthcare professional 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 of a tip over.
4. Unauthorized modifications by the end user, dealer or any other individual, including the use of parts not supplied or approved by Jackdrive Wheelchair LLC, may change the chair structure. This will void the warranty and may cause a safety hazard.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**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. These conditions could cause your chair to fail.
  - 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 and salty conditions as this may cause damage to the chair.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**TERRAIN. WARNING:**

1. Based on ANSI/RESNA testing, Jackdrive Wheelchair recommends the use of a caster wheel with a minimum diameter of 5 inches if the wheelchair will be overcoming obstacles up to ½ inch on a regular basis.

**PNEUMATIC PUNCTURE RESISTANCE KNOBBY PNEUMATIC TIRES. WARNING:**

**Do not operate your chair in loose soil or soft sandy conditions, and avoid exposure to excessive fine particles.**

1. All Jackdrive Wheelchair TNC+ arrives with factory installed knobby pneumatic 24" wheelchair tires injected with puncture resistance tire sealant. The 12" pneumatic 5<sup>th</sup> wheel FreeWheel Attachment is also injected with puncture resistance tire sealant.
2. Your TNC + with the FreeWheel Attachment is designed to Traverse Grass, Gravel, Hiking Trails, Hard Pack Sand, Hard Packed Snow and Ice and also on Firm, Even Surfaces such as Pavement, Asphalt, Concrete and Indoor Floors and Carpets.

3. Do not operate your chair in loose soil or soft sandy conditions, and avoid exposure to excessive fine particles.
4. The tire should be maintained at all times to an inflated pressure of 65 PSI in order to maintain its rated load capacity and performance. If you need to have the tires serviced be sure to have all major maintenance and repair work done by a trained service professional.
5. If you use your chair on terrain that is rougher than described above there is a danger that screws and bolts will loosen permanently, and that damages to the wheels or axles could put the rider at risk of a fall, tip-over, or loss of control.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **STREET USE. WARNING:**

In most states, wheelchairs are not legal for use on public roads. Be alert to the danger of motor vehicles on streets, roads or in parking lots.

1. This product is not intended for street/road use.
2. Avoid streets/roads whenever possible.
3. Obey and follow all legal pedestrian pathways, and laws that apply to pedestrians.
4. Be alert to the dangers of motor vehicles on streets, roads and in parking lots, if you must cross a road.
5. Due to your low position, it may be hard for drivers to see you.
6. Make sure all vehicular traffic has come to a full stop.
7. Make eye contact with drivers before you go forward. When in doubt, yield until you are sure it is safe.
8. At night, or when lighting is poor, use reflective tape on your chair, wear reflective clothing as well as lighting used for bicycles.
9. ASK FOR HELP any time you are in doubt.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **MOTOR VEHICLE SAFETY. WARNING:**

Jackdrive Wheelchairs are NOT factory equipped with the Transit Option:

1. NEVER let anyone sit in this wheelchair while in a moving vehicle. In an accident or sudden stop the rider may be thrown from the wheelchair. Wheelchair seat belts will not prevent this, and further injury may result from the belts or straps.
  - a. ALWAYS move the rider to an approved vehicle seat.
  - b. ALWAYS secure the rider with proper motor vehicle restraints in an approved vehicle seat.
2. NEVER transport the wheelchair in the front seat of a vehicle. It may shift and interfere with the driver.
3. ALWAYS secure the wheelchair so that it cannot roll or shift after the rider has been moved to an approved vehicle seat.
4. Do not use any wheelchair that has been involved in a motor vehicle or any other accident. The frame and/or components may have been changed due to the accident. Such items could be, but are not limited to: bent, loosened, and/or broken components that were subjected to an impact. Failure to heed these warnings puts you and others who may assist you at a high risk of injury.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **WHEN YOU NEED HELP. WARNING:**

##### For The Rider:

Make sure 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. The Jackdrive Wheelchair TNC+ is equipped with factory installed 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, using the appropriate tools, remove or adjust anti-tip tubes out of the way.
8. Whenever you aren't attending the wheelchair, ALWAYS use the hand parking brakes to securely lock the rear wheels, and lock the anti-tip tubes in place.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **WARNING. CHOKING HAZARD:**

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

**Failure to heed these and other warnings puts you and others at a high risk of injury.**

#### **WARNING. PINCH POINT:**

**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.

**Failure to heed these and other warnings puts you and others at a high risk of injury.**

#### **WARNINGS — FALLS & TIP-OVERS**

##### **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:
  - a. The position of the rear wheels.
  - b. 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 but not limited to;
    - The distance between the front and rear wheels.
    - 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 back pack 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 trained service professional under the advice of a healthcare advisor 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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**DRESSING OR CHANGING CLOTHES. WARNING:**

Your weight may shift if you 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. Securely lock the hand brakes and put the jack handles back in the jack handle rests.
3. Lock the factory installed anti-tip tubes in place.
4. If your chair does not have anti tip tubes in place, back the chair against a wall and securely lock the rear wheels using the hand brakes.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**OBSTACLES. WARNING:**

Riding over curbs or obstacles can cause tipping and serious bodily harm. If you have any doubt that you can safely navigate 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 risks involved in traversing obstacles.

1. Do not go over an obstacle without help.
2. Your chair is equipped with factory installed anti-tip tubes. Learn how to correctly use the anti-tip tubes.
3. Keep a lookout for danger, scan the area well ahead of your chair as you ride.
4. Make sure the floor areas where you live and work are level and free of obstructions.
5. Remove or cover threshold strips between rooms.
6. Install a ramp at entry and/or exit doors. Make sure there is not a drop off at the top or the bottom of the ramp.
7. 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.
8. Keep both of your hands on the hand rims or Jack handles, if using the Jack handles make sure your fingers are in contact with the hand brakes at all times as you go over an obstacle.
9. Never push or pull on an object (such as furniture, doorjamb etc...) to propel your chair.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**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 healthcare advisor and making sure the factory installed anti- tips are in place and used appropriately.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**REACHING OR LEANING. WARNING:**

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

1. NEVER over reach or lean, if you must, move your upper body forward in your seat, always keep your buttocks in

contact with the seat and the base of the backrest.

2. NEVER reach with both hands (you may not be able to catch yourself to prevent a fall if the chair tips).
3. NEVER reach or lean to the rear unless your chair has anti-tip tubes locked in place.
4. 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.
5. 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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **MOVING BACKWARD. WARNING:**

Your chair is most stable when you propel yourself forward. Moving the chair backwards can only be achieved by using the push rims with the jack handles in the rest. Use extra care when you move your chair backward. You may lose control or tip over if one of the rear wheels hits an object and stops rolling.

#### **WARNING:**

1. After returning the Jack handles to the Jack Handle rests with the hand brakes dis-engaged, maneuver the Jackdrive Wheelchair TNC+ backwards using only the push rims as you would a regular wheelchair.
2. We recommend using factory installed anti-tip tubes.
3. Propel your chair slowly and smoothly.
4. Stop often and check to be sure your paths are clear.

**WARNING: If you experience any resistance while reversing using the push rims, DO NOT force the wheelchair backwards as this may cause damage to the Jackdrive Propulsion System, carefully use the push rims to first roll slowly forward before using your hands to lightly lift up the Jack handles, propel forward one stroke until the mechanisms in the hubs are cleared and then try reversing again.**

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**RAMPS, SLOPES AND SIDE-HILLS. WARNINGS: Always ride carefully at a safe speed.**

**Ramps, slope and hillsides should be less than 6° or you may be at risk of a tip over.**

**WARNING.** We highly recommend against using the Jackdrive Propulsion System when traversing ramps, slopes and hill-sides.

1. When approaching a ramp, slope or hill-side.
  - a. First come to a complete stop on a flat surface.
  - b. Put both jack handles back into the Jack handle rests with the brakes dis-engaged.
  - c. Use the push rims to traverse ramps, slopes and hill-sides as you would an ordinary wheelchair.



2. Be careful when navigating hills, slopes, ramps and hill-sides, and always operate under control.
  - a. Be specifically aware of the position of your body in the chair. Correct balance when navigating ramps, slopes and hill-sides may differ from conventional wheelchairs and may require the user to reposition themselves to avoid tipping.
3. Be careful of excessive speed and ride under control at all times, especially when going downhill.
  - a. Maintain proper braking pressure using both hand rims and control downhill speed at all times to avoid accidents/collisions

**NOTE** The Jackdrive Propulsion System is a precision mechanical device. Be cautious of moving parts, metal edges and other mechanisms that may cause injury.

**WARNING:** Whenever possible, avoid riding on a slope, which includes a ramp or side-hill. 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° or you may be at risk of a tip over.
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. Make sure ramp is wide enough that you have no risk of going off the edge.
5. Do not stop on a slope, if you stop you may lose control of your chair.
6. 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 can stop a front caster and cause the chair to tip forward.
7. To Reduce The Risk Of A Fall Or Tip-Over:
  - a. When ascending lean or press your body UPHILL. This will help adjust for the change in the center of balance caused by the slope or side-hill.
  - b. Keep pressure on the hand rims, DO NOT make an abrupt stop on a downward slope. Use both push rims simultaneously to slow your chair down. If you stop abruptly, you may lose control of your chair.
8. Always use both push rims simultaneously, if you do not, it will likely cause your chair to veer out of control.
9. Keep pressure on both the hand rims to control your speed on a down slope. If you go too fast you may lose control.
10. 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 Make sure 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.

ASK FOR HELP any time you are in doubt.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**WARNING. IF you need to go down a hill:**

- a. The down slope should be less than 6° or you may be at risk of a tip over.
- b. GO SLOW control your speed.
- c. ALWAYS Go straight down.
- d. NEVER turn on a hill.
- e. ALWAYS lean backward.

WARNING. IF you need to go up a hill:

- a. The up slope should be less than 6° or you may be at risk of a tip over.
- b. ALWAYS Go straight up.
- c. Don't stop.
- d. NEVER turn on hill.
- e. ALWAYS lean forward.

WARNING. If you need to traverse a Hill-Side:

- a. The hill-side must be less than 6° or you may be at risk of a tip over.
- b. DON'T STOP.
- c. NEVER turn on a hill.

WARNING. If you need to traverse a Ramp:

- a. Go Slowly. The ramp must be less than 6° or you may be at risk of a tip over.
- b. Watch out for Drop-offs.
- c. ALWAYS go straight up or straight down.
- d. Stay centered on the ramp

WARNING. For Attendants: Follow these steps to help the rider go up or down a ramp:

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

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**TRANSFERS. 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. **ALWAYS** securely lock both the rear wheels using the hand brake locks, making sure they will not move forwards or backwards before you transfer.

To avoid a fall:

1. Work with your health care advisor to learn safe methods for transfers.
  - a. Learn how to position your body and how to support yourself during a transfer.
  - b. Have someone help you until you learn safe transfer methods.
2. **DO NOT** use the Jack handles as support. Supporting your weight off of the Jack handles could damage the Jackdrive Propulsion System and should be avoided at all times.
3. Do not use the hand rims to supporting your weight while transferring. When weight shifting and/or transferring, refrain from using **ONLY** the hand rims. Hands should be placed on the tire or tire **AND** hand rim together. Supporting your weight off of just the hand rim could damage the wheels, the hand rims and injure the rider, and must be avoided.
4. **SECURELY** lock the rear wheels using the hand brakes before you transfer.
5. Be aware that the chair can still slide and/or tip. The brakes keeps the rear wheels from rolling while you are performing the transfer.
6. Move your chair as close as you can to the seat you are transferring to. If possible, use a transfer board.
7. Rotate the front casters until they are as far forward as possible.
8. Make sure your feet do not catch in the space between the footrests.
9. Avoid putting weight on the footrests as this may cause the chair to tip.

10. If you can, and if your chair is equipped with swing away the leg/footrests, remove or swing them out of the way.
11. Make sure armrests are removed, or out of the way and do not interfere with the transfer.
12. 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.

Before transferring:

1. Make sure the parking brake is securely set.
2. Swing away or remove the armrests.
3. Flip up or swing-away or remove the leg/footrests.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**CURBS, SINGLE STEP, STAIRS. WARNING:**

**NOTE** Anti tip. If you have to climb or descend a curb. Climb or descend a step. Climb or descend stairs, or overcome an obstacle it will become necessary to have an attendant, by using the appropriate tools, make sure the anti tip tubes are removed or adjusted out of the way, so that the chair and rider do not get stuck and/or become unstable.

**CURBS & SINGLE STEPS. 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.

**NOTE:** Make sure the rider returns the Jack handles back to the Jack handle rests with the hand brakes dis-engaged

1. Do not try to climb a high curb or step (more than 4 inches 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. Do not climb or descend at an angle. 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 cause injury to the rider and damage your chair or loosen fasteners.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**CLIMBING A CURB OR SINGLE STEP. WARNING:**

For Attendant:

Follow these steps to help the rider climb a curb or single step going FORWARD:

1. Stay behind the chair.
2. Face the curb and carefully tilt the chair up on the rear wheels so that the front casters clear the vertical face of the curb or step.
3. Move forward, placing the front caster wheels on the upper level as soon as you are sure they are past the edge.
4. Continue forward until the rear wheels make contact with the vertical face of the curb or step. Lift and roll the rear wheels to the upper level.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**DESCENDING A CURB OR A SINGLE STEP.**

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 backwards so the front casters are slightly off the ground.
3. When the chair is at its balance point, carefully step forward until the rear wheels reach the edge of the curb or step.
4. Gently allow the rear wheels to slowly roll down onto the lower level while maintaining control of the chair.
5. When the rear wheels are safely on the lower level, tilt the chair back to its original balance point, bring the front caster gently down until they are once again in contact with the ground.
6. Push the chair slightly forward on the lower level until you are standing on the lower level behind the chair.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **STAIRS. 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 2 attendants for safety.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **CLIMBING STAIRS. 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. He or she tilts the chair back to its balance point.
4. A second attendant at the front firmly grasps a non-detachable part of the front frame of the chair 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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **DESCENDING STAIRS. 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. He or she tilts the chair to the balance point of the rear wheels and rolls it to the edge of the top step.
4. A second attendant stands on the third step from the top and grasps a non-detachable part of the front frame of the chair. He or she lowers 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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **COMPONENTS AND OPTIONS. WARNING:**

##### **ANTI-TIP TUBES. WARNING:**

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

1. Jackdrive recommends the use of the factory installed anti-tip tubes: Jackdrive Wheelchair will arrive with the anti-tip tubes locked in place (in the “down” position) anti-tip tubes should be BETWEEN 1- 1/2 to 2 inches off the ground.
  - a. If set higher than 2 inches, they may not prevent a tip-over.
  - b. If set lower than 1 ½ inches, they may “hang up” on obstacles and cause a fall or tip over.

2. Changes and/or adjustments should only be done by a trained service professional with the advice of a healthcare professional.
3. If you have to climb or descend a curb, step, stairs or overcome an obstacle it will become necessary to have an attendant, by using the appropriate tools, make sure the anti tip tubes are removed or adjusted out of the way, so that the chair and rider do not get stuck and/or become unstable.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **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 the non-detachable part of the frame with the parking brakes engaged.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **CUSHIONS & SLING SEATS. WARNING:**

1. Jackdrive sling seats and standard foam cushions (not included) 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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **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 an authorized supplier.
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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **FOOTRESTS. WARNING:**

1. At the lowest point, footrests should be AT LEAST 2 inches 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.
  - c. Footrests should be flipped up and or swung out of the way or removed whenever entering or exiting the wheelchair.
3. NEVER lift this chair by the footrests. Footrests detach and will not bear the weight of this chair. Lift this chair only by non-detachable parts of the main frame with the parking brakes engaged.
4. NEVER use the footrests of your chair to open doors, this may cause them to fail prematurely and create an unsafe situation.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**POSITIONING BELTS (If they are part of the chair). WARNING:**

**NOTE** Please carefully review the motor vehicle warning section contained in this manual.

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 too 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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**PNEUMATIC PUNCTURE RESISTANCE KNOBBY TIRES. WARNING:**

- a. All Jackdrive Wheelchair TNC will arrive with factory installed Pneumatic Puncture Resistant Knobby 24" wheelchair tires injected with tire sealant. The mountain bike style tread is meant for off road, handles rough terrain and trails with ease. The tire has light gray non-marking tread with a black side wall. 65 PSI. If you need to have the tires serviced be sure to have all major maintenance and repair work done by a trained service professional.
- b. Check for wear on the tire treads. The wear on the tire treads will depend on the amount you ride your chair. At least once a week, check the tire pressure to insure they are 65PSI.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**PUSH HANDLE BACK CANES. WARNING:**

All Jackdrive Wheelchair TNC+ will arrive with factory installed push handle back cane.

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 and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**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 healthcare advisor to find the best rear axle set-up for your chair. Do not change the set-up UNLESS you consult your healthcare advisor first.



**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **SEAT AND BACK UPHOLSTERY. 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 or seat back may fail.
2. Sling seat fabric will weaken with age and use. Look for fraying, thin spots, or stretching of fabrics especially at edges and seams.
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 the flame retardation qualities of the fabric.
5. If tension Adjustable upholstery is present, loosen straps or remove upholstery prior to folding or unfolding the chair.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **WARNINGS — FOR SAFE USE**

##### **USE AND MAINTENANCE. WARNING:**

The owner of this chair is responsible for making sure that it has been setup and adjusted by a trained service professional under the advice of a healthcare advisor. The chair may require periodic safety and function checks, or certain in-use adjustments that may be performed by the owner, caregiver or trained service professional. Always use parts that have been recommended or approved by Jackdrive when maintaining this chair.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **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 that have been recommended or approved by Jackdrive.
4. To protect your investment, have all major maintenance and repair work done by a trained service professional.
5. Inspect and maintain this chair strictly per the maintenance guide lines.
6. If you detect a problem, make sure to order parts, or have service, and have all maintenance and repair work done by a trained service professional before use.
7. At least once per year, have a complete inspection, safety check, and service of your chair by a trained service professional.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **CRITICAL SAFETY CHECKS.**

1. Tires:
  - a. Check for wear on the tire treads. The wear on the tire treads will depend on the amount you ride your chair. At least once a week, check the tire pressure to insure they are 65PSI.
2. Push rims:
  - a. Check to make sure the push rims are secure and not loose and wobbling.
3. Axles, Axle Mounting Plates, Axle Sleeves & Axle Nuts:
  - a. When checking the axles, axle mounting plates, axle sleeves and axle nuts every three months, make sure they are clean and tight. Loose axle sleeves and axle nuts will affect performance.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

## **CLEANING TIPS**

1. Do not submerge your wheels in water or clean with a pressure washer.
2. Avoid sandy conditions and any other exposure to excessive fine particles.
3. Use only mild soap and water to clean your wheels, no solvents, abrasives or bleach should be used.
4. Do not disassemble or remove your wheel hubs. If the Jackdrive hubs needs servicing, it should only be done by a trained service professional.
5. 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.
6. Axles and Moving Parts
  - a. Clean and check 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.
7. Upholstery
  - a. Hand-wash (machine washing may damage fabric).
  - b. Drip-dry only. DO NOT machine dry as heat will damage fabric.
8. Basic Maintenance Materials available at local store
  - a. Clean rags or cotton cloth.
  - b. Teflon-based Lubricant where necessary.
  - c. Mild Detergent.
  - d. DO NOT USE 3 in 1 oil, or WD-40 ® for lubrication. Only use Teflon based Lubricant when working on this wheelchair.

## **NOTE**

You do not need to grease or oil the chair, however you may need to service the wheelchair chain and the Jackdrive Propulsion System as needed. Have all service, major maintenance and repair work done by a trained service professional.

## **SAFETY CHECKLIST. WARNING:**

**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 trained service professional. Service and/or adjustments should only be done with the advice of a healthcare professional.

1. Weekly:
  - a. Hand Brakes, brake cables and brake calipers.
  - b. Tires, tire treads, spokes and hand rims.
  - c. Jack handle grips, shifter grips and springs.
  - d. Push handles.
2. Monthly:
  - a. Upholstery.
  - b. Visually check for loose hardware.
3. Every 3 months:
  - a. Axles, axle mounting plates, axle sleeves & axle nuts
  - b. Wheels.
  - c. Tires.

- d. Spokes.
  - e. Casters.
  - f. Anti tip tubes.
4. Every 6 months.
- a. Armrests.
  - b. Frame.
  - c. Cross brace.
5. Everything else as needed but not limited to:
- a. Drive Chain.
  - b. Internal chain tensioner springs.  
(Located inside the jack handles)
  - c. Drive chain guide sprocket.
  - d. Brake calipers.
  - e. Brake rotor.
  - f. Hand brake levers and locking mechanisms.
  - g. Brake cables.
  - h. Jackdrive hubs.
  - i. Shifters, shifter grips, shifter triggers and springs.
  - j. Jack handle grips.
  - k. Check for loose nuts and bolts.

**NOTE:** Periodically, or as needed, Jackdrive recommends servicing the Jackdrive Wheelchair TNC+ and the Jackdrive Propulsion System by a trainer service professional under the advice of a health care advisor.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **TROUBLESHOOTING SOLUTIONS. WARNING:**

1. Looseness in chair:
  - a. All Jackdrive Wheelchairs TNC+ come with factory installed Knobby pneumatic puncture resistance tires, make sure the tire pressure of 65PSI is maintained in both the rear tires.
  - b. Make sure all nuts and bolts are tight.
  - c. Make sure all spokes and nipples are tight on radial spoke wheels.
2. Sluggish turning:
  - a. Make sure the tire pressure of 65PSI is correct in both left and right rear tires.
  - b. Make sure all spokes and nipples are tight.
  - c. Make sure main axle nuts are properly tightened.
3. Squeaks and rattles:
  - a. Make sure all nuts and bolts are tight.
  - b. Make sure main axle nuts are properly tightened.
  - c. Make sure all spokes and nipples are tight on radial spoke wheels.
  - d. Use Tri-Flow Lubricant (Teflon®- based) between frame connections and parts.
4. Caster flutter:
  - a. Make sure all nuts and bolts are tight.
  - b. Check for proper caster fork internal tension.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**FACTORY INSTALLED ANTI TIP TUBES. WARNING:**

All Jackdrive Wheelchairs TNC+ will arrive with factory installed anti-tip tubes. Jackdrive recommends using anti tip tubes.

Adjusting anti tip tube.

- a. The anti tip wheels may have to be raised or lowered, by using the appropriate tools, to achieve proper clearance of 1½ to 2 inches.
- b. Both wheels should be exactly the same height.
- c. Service and/or adjustments should only be done by a trained service professional with the advice of a healthcare professional.

**NOTE** - Jackdrive recommends using the factory installed “anti-tip devices” The mechanical advantage provided by the Jackdrive lever propulsion system makes it very easy for the front wheels to lift up and loose contact with the riding surface AKA “pop a wheelie” and could result in the wheelchair overturning if used without anti-tip devices.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

**FRONT CASTER. WARNING:**

**NOTE** The internal mechanism of the casters have been adjusted to factory specs to accommodate the Jackdrive Propulsion System. Readjusting the internal mechanism of the casters by loosening them will cause the front casters wheels to flutter.

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

**PADDED SWING AWAY ARM RESTS. WARNING:**

**NOTE:** The padded swing away armrests must be swung away towards the back and locked in place or removed before engaging the Jack handles.

**WARNING:** We do not recommend reducing the height of the padded swing away armrests as it’s location is vital to the clearance of the jack handles and the operation of the Jackdrive Propulsion System.

Swing-away armrests must swing away towards the back and locked in place to allow a lateral transfer, alternately they can be removed.

1. Installation
  - a. Slide armrests into receiver tube located on rear of the frame.
2. Swing away toward front.
  - a. Lift armrests slightly up out of the locked position and rotate to the side then front until they drop into the receiver tube in the front locking position.
3. Swing away toward back.
  - a. Lift armrests slightly up out of the front locked position and rotate to the back until they drop into the receiver tube in the back locking position.
4. Remove armrests.
  - a. Pull armrests straight up out of the receiver tube.

**WARNING;** 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 weight on them, such as transferring using this armrest.

**WARNING** Padded swing away armrests are not transfer devices and must be rotated out of the way prior to transferring.

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

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **SWING IN SWING OUT FOOT/LEG-RESTS. WARNING:**

**NOTE:** Make sure that your trained service professional has correctly adjusted your foot/leg rests with the advice of a healthcare professional. The original setup should not be changed without first checking with that advisor. The footrest position is key to keeping your body in the proper alignment, and providing a stable support for your legs and torso.

Where applicable: Leg rests and footrests should be swung out of the way, or removed for transfers.

Swing-in Swing-out foot/leg-rest:

1. Basic foot/leg-rest installation;
  - a. Place swing-in/swing-out pivot saddle into the receiver on the front frame tube with the foot/leg-rest facing outward from the frame.
  - b. Rotate the footrest inwards until it locks into place on the locking plate.
2. Removal;
  - a. To remove the swing in/swing out foot/leg rest, release the latch by pulling the lever upwards, disengaging them from the locking plate.
  - b. Rotate the footrest outwards and lift it off the chair.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **BACKPOSTS AND INTEGRAL PUSH-HANDLES.**

All Jackdrive Wheelchairs TNC+ are shipped with push-handle back canes.

#### **SEATING AND SLING SEAT UPHOLSTERY. WARNING:**

**NOTE:** The sling seat folding strap, where applicable, is not intended as a carrying strap.

Where Applicable: The sling seat can be adjusted. Adjustments should only be done with the advice of a healthcare professional.

1. Sling seat upholstery.
  - a. Check monthly for excessive stretching of the upholstery, or loose attaching hardware. If you determine the upholstery can no longer be adjusted tight, contact your trained service professional for a replacement.
2. Cushion installation.
  - a. Place cushion on the seat sling with the hook material side down.
  - b. Press firmly into place.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **STORAGE TIPS. WARNING:**

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, make sure it is in proper working order. Inspect and service all items on the “Maintenance guide”
3. If stored for more than three months, have your chair inspected by a trained service professional before use.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

#### **INSPECT. WARNING:**

After the wheelchair is adjusted, it should roll smoothly and easily. All accessories should also perform smoothly. If you have any problems consult your trained service professional and your health care advisor.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**



## **SERVICE AND ADJUSTMENTS. WARNING:**

The owner of this chair is responsible for making sure that it has been setup and adjusted by a trained service professional under the advice of a healthcare advisor. Service and/or adjustments should only be done with the advice of a healthcare professional. Always use parts and/or accessories that have been recommended and approved by Jackdrive Wheelchair LLC. when servicing this chair. DO NOT USE 3 in 1 oil, or WD-40 ® for lubrication. Only use Teflon based Lubricant when working on this wheelchair.

## **REAR AXLES AND AXLE PLATES. WARNING:**

The most important adjustment on your Jackdrive Wheelchair TNC+ is the position of the rear axle. The center of gravity, wheel camber and wheelbase are all determined by the axle adjustment.

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. Service and/or adjustments should only be done with the advice of a healthcare professional.

**If you fail to heed these and all other warnings, you are at a high risk of damage to yourself and/or your chair, a fall, tip-over or loss of control may occur and can cause severe injury to the rider and/or others and those who may be assisting you.**

## **JACKDRIVE LIMITED WARRANTY**

**A warranty guaranteeing all Jackdrive Wheelchair Town N Country Plus to be free from defects in material or workmanship exists for a period described of 90 days from date of shipment.**

### **AFTER SALES**

Manufacturer will provide technical support to Distributor, Customers or End User (or specific dealers, when applicable), and assist in product training and troubleshoot issues with product. If products are delivered to customers in any dysfunctional condition, except in the case of damage or dysfunction due to damage from shipping or customer and/or end user neglect, the manufacturer will provide parts or replace units as is reasonable for the situation to get the customer a like new product in a timely manner.

Manufacturer will provide the only warranty associated with the Jackdrive Wheelchair Town N Country Plus Warranty. All details are stipulated in this owner's manual and warranty. Any exceptions outside of the Jackdrive Wheelchair Town N Country Plus warranty will not be considered.

1. New, unaltered and unused product are able to be returned within 10 calendar days of receipt by Customer to Jackdrive Wheelchair LLC. 4704 Pompano St. Placida FL 33946 Ph # 919-257-1195.

The Customer is responsible for the cost of return shipping as well as a 15% restock fee deducted from the refund.

- a. Definition of new, unaltered and unused condition is: without showing any sign of wear or damage in any way. This includes damages as a result of poor/faulty return packaging.
  - b. Jackdrive Wheelchair LLC will examine the product to insure it is in like new, unaltered, unused condition. After inspection of the product, Jackdrive Wheelchair will instruct distributor accordingly regarding refund.
2. Products which are delivered in dysfunctional condition due to shipping damage or some other obvious defect or damage must be photo documented by the customer and or end user and sent to Distributor and Manufacturer within 1 week of receipt. It is the responsibility of the customer to open and inspect their product for obvious defects and properly report them before use of the product. If the customer uses the product despite obvious damage or defects to the product, products are ineligible for return or warranty replacement.
3. A warranty guaranteeing all Jackdrive Wheelchair Town N Country Plus to be free from defects in material or workmanship exists for a period described of 90 days from date of shipment. Upholstery materials are warranted to be free from material defects and work at the time of delivery, but because they can be damaged by normal use, they are warranted for 60 days.

Only Jackdrive approved components validate this warranty. This warranty does not include labor charges or shipping incurred in replacement parts installation.

4. Freight charges to the factory are at the expense of consumer to seller.
5. No credit will be given on any repairs to damaged or defective items without prior written approval of the Manufacturer and Distributor. Manufacturer reserves the right to require that any such item be returned to the factory for inspection.
6. The warranty does not cover the following: Light shipping damage, customer dissatisfaction with the functionality, use or appearance of the product, damage from installation of the product, lost or stolen packages, or product misplaced or lost by the customer.

**NOTE:** Our warranty covers repairs or replacements of all non-wear components of the Jackdrive Wheelchair TNC+ subject to the terms below. Wear parts, such as, but not limited to; seat back and bottom, handle grips, tires, brakes, brake cables, chains, springs and bearings etc... are not covered.

1. We warrant all Jackdrive-made parts and components of this wheelchair against defects in material and workmanship for 90 days from the first date of product delivery.
2. JACKDRIVE WHEELCHAIR TNC+ frames and manufactured parts are warrantied by JACKDRIVE WHEELCHAIR LLC. against manufacturing defects in materials and/or workmanship for a period of 90 days from the date of original receipt of retail purchase delivery.
3. Jackdrive Wheelchair LLC will, at its option:
  - a. Repair the product using new or refurbished parts or:
  - b. Replace the product with a new or refurbished product.
4. To register the Jackdrive Wheelchair TNC+ for warranty service, the purchaser must submit the fully completed Product Registration and Warranty Form to the customer service address listed within thirty (30) days of the date of retail purchase delivery.
5. This limited warranty applies only to mobility devices purchased from JACKDRIVE WHEELCHAIR LLC., from Authorized JACKDRIVE WHEELCHAIR LLC. Retailers, or other outlets specifically authorized by JACKDRIVE WHEELCHAIR LLC. to distribute the JACKDRIVE WHEELCHAIR TNC+.

**NOTE** "Refurbished" means a product or part that has been returned to its original specifications. These are your exclusive remedies. Jackdrive Wheelchair LLC does not warrant that the operation of the product will be uninterrupted or error-free.

#### **PRODUCT COVERAGE:**

1. Only the components packaged with the product are covered.
2. During the duration of this limited warranty, Jackdrive will either repair any defective frame or component, or, at our option, replace any defective frame or component with the same or most nearly comparable model or component then available.
3. Cost of technical assistance and labor is not covered.
4. When a product or part is exchanged, the original item becomes Jackdrives Wheelchair LLCs' property.
5. Any replacement product provided under this limited warranty may vary in the color and/or cosmetic design from the original product.
6. 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.

#### **LIMITATIONS. WHAT IS NOT COVERED BY THIS LIMITED WARRANTY:**

1. This limited warranty does not apply if the product is used with products or services that are not compatible with the Jackdrive Wheelchair TNC+.

2. If the wheelchair and the Jackdrive Propulsion System has been modified or tampered with in any way
3. The warranty also does not apply to damaged caused by but not limited to, an Act of God, misuse, use in trick riding, ramp riding, jumping, aggressive riding, riding on severe terrain, riding in severe climates, riding with heavy loads, commercial activities and any other types of nonstandard use, abuse, negligence, accident, wear and tear, unreasonable use, can dramatically shorten the useful product life cycle of a JACKDRIVE WHEELCHAIR TNC+ that would not be covered by this warranty, or by other causes that do not fall into the category of defective materials or workmanship.
4. The warranty does not cover the Jackdrive Wheelchair TNC+ being used beyond the maximum weight limit.
5. The warranty will not cover the Jackdrive Wheelchair TNC+ if the serial number has been altered or removed.
6. The warranty does not cover damage due to improper use or installation per this manual.
7. The warranty does not cover damage resulting from not abiding by the warnings in the pages of this manual.

#### **WE DO NOT WARRANT:**

1. All wearable parts, such as, but not limited to:
  - a. Tires, upholstery, seat backs and bottoms, brakes, brake pads, brake cables and brake calipers, push-handle, handle grips, shifter grips, shifter, springs, chains, bearings etc...are not covered.
  - b. Damage from neglect, accident, misuse, or from improper installation or repair.
  - c. Products modified without Jackdrive Wheelchair LLC's express written consent.
  - d. Damage from exceeding the total gross weight limit of 250 lbs./113.4 kilos.
  - e. Damage resulting from normal wear and tear is not covered.
2. This warranty is VOID if the original chair serial number tag is removed or altered.
3. Any after-sale modification that prevents the chair from being returned to its original state will void the warranty.
4. Damage resulting from improper assembly or maintenance, or from installation of parts and accessories not compatible with the Jackdrive Wheelchair TNC+ is not covered.
5. This warranty applies in the USA only.
6. This warranty is not transferable and only applies to the first consumer purchase of this wheelchair through an authorized Jackdrive Wheelchair LLC. Dealer, and is not transferable to subsequent owners.

#### **WHAT WE WILL DO:**

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

#### **WHAT YOU/YOUR DEALER MUST DO:**

1. Obtain from an Authorized Supplier, while the warranty is in effect, prior approval for return and/or repair of covered parts.
2. Return the wheelchair or part(s), all freight charges prepaid, to  
Jackdrive Wheelchair LLC. 4704 Pompano St. Placida Fl 33946
3. Pay the cost of technical support, labor to repair, remove, or install parts.

#### **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 merchant ability, 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.

#### **TO OBTAIN WARRANTY SERVICE:**

1. You must contact Jackdrive Wheelchair LLC and receive a confirmation in writing prior to returning any product for warranty service.
2. You must deliver the product, all freight charges prepaid, in either its original packaging or packaging affording an equal degree

of protection to the address and facility specified by Jackdrive Wheelchair L L C.

3. For any warranty claim to be considered, we must receive proof of issue along with the original, dated delivery receipt.

This limited warranty is void if the JACKDRIVE WHEELCHAIR TNC+ is subjected to, but not limited to, abuse, neglect, improper repair, improper maintenance, alteration, modification, an accident, Act of God or other abnormal, excessive, or improper use. Any after-sale modification that prevents the chair from being returned to its original state will void the warranty.

**NOTE Unless otherwise instructed by Jackdrive Wheelchair LLC. In writing, Jackdrive Wheelchair L L C. will not reimburse you for service performed by others.**

1. To receive instructions and authorization for obtaining repair or replacement warranty services, please contact your original equipment provider.
2. Alternatively, you may contact customer support at [info@jackdrivewheelchair.com](mailto:info@jackdrivewheelchair.com) telephone (919) 257-1195, or write to the following address: Jackdrive Wheelchair L L C. 4704 Pompano St. Placida Fl 33946
3. You must also provide a proof of purchase
  - a. This could be in the form of a dated bill of sale or invoice receipt.
  - b. The document should provide sufficient evidence that the request for service was made within the warranty period.

**NOTE** Certain States and jurisdictions may impose limitations to the terms and length of an implied warranty, so the above terms and conditions may not apply. This limited warranty gives the purchaser specific legal rights. You may have other rights that vary based on state or jurisdiction.

#### RETURNS;

1. You have up to 10 calendar days from receipt of merchandise to return the Jackdrive 2.0 Wheelchair.
2. A 15% restock fee will be charged, even when returned within the first 10 calendar days of ownership on all returns.
3. Refunds will be issued accordingly, 10 working days after merchandise is received and inspected, found to be in unaltered, undamaged, unused condition, in its original factory settings and in its original shipping carton.
4. Returns will not be accepted If the original chair serial number tag is removed or altered.
5. The customer will bear the cost of return shipping
6. In the event that the damage occurs during shipping back to us, the issue will need to be resolved between you and the shipping company. We strongly recommend that you package the product properly, secure a tracking number and add insurance to protect against this possibility.
7. To begin a return, please contact us at [info@jackdrivewheelchair.com](mailto:info@jackdrivewheelchair.com) or 919-257-1195 for return authorization and instructions

**NOTE Customized Jackdrive Wheelchairs TNC+ are not available for returns and/or refunds.**

**THIS IS THE EXCLUSIVE REMEDY UNDER THIS WARRANTY. ANY AND ALL OTHER REMEDIES AND DAMAGES THAT MAY OTHERWISE BE APPLICABLE ARE EXCLUDED, INCLUDING, BUT NOT LIMITED TO, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR PUNITIVE DAMAGES.**

**THIS IS THE ONLY WARRANTY MADE BY JACKDRIVE WHEELCHAIR LLC. ON ITS FRAMES AND COMPONENTS, AND THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION HEREIN. ANY WARRANTIES THAT MAY OTHERWISE BE IMPLIED BY LAW INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANT ABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE EXCLUDED.**

**JACKDRIVE WHEELCHAIR LLC. is not responsible for damages resulting from riders who are above any of the aforementioned thresholds. Unfortunately, we cannot extend the JACKDRIVE WHEELCHAIR LLC. guarantee to riders above the aforementioned thresholds.**

If you have any issues with your Jackdrive Wheelchair TNC+ you can contact us directly at [info@jackdrivewheelchair.com](mailto:info@jackdrivewheelchair.com) or call customer service at 919-257-1195.

This warranty is the only warranty for the Jackdrive Wheelchair Town N Country Plus. All other warranties, including implied warranties of marketability and fitness for a particular purpose are hereby disclaimed. Damage resulting from missus, negligence, accident or alteration are excluded and will not be paid. Distributor or manufacturer will not be liable for any circumstances or incidental damages whatsoever.