PUSHPAK
MOTORS

OWNER'S MANUAL

ETR1000 | ETR2000 | ETR3000 | ETR4000 | ETR5000, ETR6000,ETR7000

3rd Edition, 2021

IMPORTANT:

This manual contains important safety, performance, and service information. Please read it before taking the first ride of your Pushpak.

NOTE:

This manual is not intended as a comprehensive use, service, repair, or maintenance manual. Please seek assistance from a qualified technician for service, repairs, or maintenance.

1-900-888-888, support@pushpak.com, pushpakmotors.net

INTRODUCTION

Congratulations on the purchase of your new Pushpak. This manual is designed to give you the information you need for the safe operation and maintenance of your Pushpak. Please read it thoroughly before riding your Pushpak.

Your Pushpak's serial number is stamped on the front of the steering column or adhered underneath the VIN cap in the front interior panel. Please record it below if your Pushpak is lost or stolen. You may also want to register your serial number with your local police department. Please retain your sales receipt as proof of purchase and keep with the information below.

MODEL NO: _____

SERIAL NO: _____

COLOR: _____

DATE OF PURCHASE: _____

CONTENTS

GENERAL WARNING

Riding a Pushpak involves the risk of injury and damage. By choosing to ride a Pushpak, you assume the responsibility for that risk, so it is essential to know and practice safe and responsible riding rules of proper use and maintenance. Proper usage and maintenance of your Pushpak reduce the risk of injury.

This manual makes no representation of the safe use of the Pushpak under all conditions. There are risks associated with using a Pushpak that cannot be predicted or avoided, which is the rider's sole responsibility. As with all vehicles, practice defensive riding to ensure your safety and the safety of others.

Electric tricycles are relatively new to the vehicle landscape. Riders are at present generally required to obey current state and local bicycle laws and regulations where they ride, in addition to relevant motor vehicle and traffic laws. These laws and regulations vary by jurisdiction. It is the rider's responsibility to be aware of, understand and, obey these laws and regulations and any changes therein as they affect the riding of your Pushpak. For information on your state and local laws and regulations, contact the appropriate state and local regional offices directly or visit their official websites.

Laws in your jurisdiction may not require wearing a helmet. For your safety, Pushpak Motors recommends wearing a helmet and protective eyewear when operating your Pushpak. Proper helmets must meet standards set by the Consumer Product Safety Commission (CPSC).

Also, for your safety and full-time life service of your Pushpak, ensure you understand and adhere to the capacities for your Pushpak model, including load, climbing ability, and maximum range.

Pushpak Motors further recommends the following resources for helpful information on riding your Pushpak under current bicycle laws. (*Note: Pushpak Motors does not endorse or claim the information provided by these resources to be legally accurate. Please refer to your official state and local laws and regulations to ensure compliance when riding your Pushpak.)*:

The League of American Bicyclists – www.bikeleague.org "People For Bikes" – www.peopleforbikes.org

FEATURES & SPECIFICATIONS

ETR1000	**ETR2000**
DIMENSIONS 5 x 2.4 x 3.6 Feet	DIMENSIONS 5.11 × 2.6 × 3.2 Feet
WEIGHT 200 Pounds	WEIGHT 200 Pounds
MOTOR 650W DC Brushless	MOTOR 650W Brushless
DRIVING METHOD Rear Differential	DRIVING METHOD Rear Differential
FRAME 6061 Aluminum Alloy	FRAME 6061 Aluminum Alloy
CONTROLLER 48V 35Ah 1000W Brushless	BATTERY 48V 35Ah Lithium-Ion
BRAKES Front: Hydraulic Disc	Battery Life: 2-3 Years
Rear: Drum	Charger: AC 58.8V 5.0A
BATTERY 48V/35Ah Lithium-Ion	Charge Time: Up To 8 Hours
Battery Life: 2-3 Years	CONTROLLER 48V 35Ah 1000W Brushless
Charger: AC 58.8V 4.0A	BRAKES Front: Drum
Charge Time: Up To 8 Hours	Rear: Hydraulic Disc
WHEELS Rim Type: 6061 Aluminum Alloy	WHEELS Rim Type: 6061 Aluminum Alloy
TIRES 3.00-10 Tubeless	TIRES 3.00-8 Tubeless
Maximum Climbing Capability: 20o	Maximum Climbing Capability: 20o
Maximum Load: 500 Pounds	Maximum Load: 500 Pounds
Maximum Speed: 18 Miles Per Hour	Maximum Speed: 18 Miles Per Hour
Maximum Range: 40-50 Miles	Maximum Range: 40-50 Miles
BUILT-IN FEATURES LCD Display. Turn Signals, Horn, Headlight, Taillights, front and rear Storage Basket.	BUILT-IN FEATURES LCD Display. Turn Signals, Horn, Headlight, Taillights, front and rear Storage Basket.

ETR3000	ETR4000
DIMENSIONS 6.1 x 2.4 x 3.6 Feet	DIMENSIONS 7 x 3 x 3.7 Feet
WEIGHT 240 Pounds	WEIGHT 265 Pounds
MOTOR 650W DC Brushless	MOTOR 650W DC Brushless
DRIVING METHOD Rear Differential	DRIVING METHOD Rear Differential
FRAME 6061 Aluminum Alloy	FRAME 6061 Aluminum Alloy
CONTROLLER 48V 35Ah 1000W Brushless	CONTROLLER 48V35Ah 1000W Brushless
BRAKES Front: Drum	BRAKES Front: Drum
Rear: Hydraulic Disc	Rear: Hydraulic Disc
BATTERY 48V 35Ah Lithium-Ion	BATTERY 48V 35Ah Lithium-Ion
Battery Life: 2-3 Years	Battery Life: 2-3 Years
Charger: AC 58.8V 5.0A	Charger: AC 58.8V 5.0A
Charge Time: Up To 8 Hours	Charge Time: Up To 8 Hours
WHEELS Rim Type: 6061 Aluminum Alloy	WHEELS Rim Type: 6061 Aluminum Wheel
TIRES 3.00-10 Tubeless	TIRES 3.00-10 Tubeless
Maximum Climbing Capability: 20o	Maximum Climbing Capability: 20o
Maximum Load: 500 Pounds	Maximum Load: 500 Pounds
Maximum Speed: 18 Miles Per Hour	Maximum Speed: 18 Miles Per Hour
Maximum Range: 40-50 Miles	Maximum Range: 40-50 Miles
BUILT IN FEATURES LCD Display. Turn Signals, Horn, Headlight, Taillights, front and rear Storage Basket.	BUILT IN FEATURES LCD Display. Turn Signals, Horn, Headlight, Taillights, front and rear Storage Basket.

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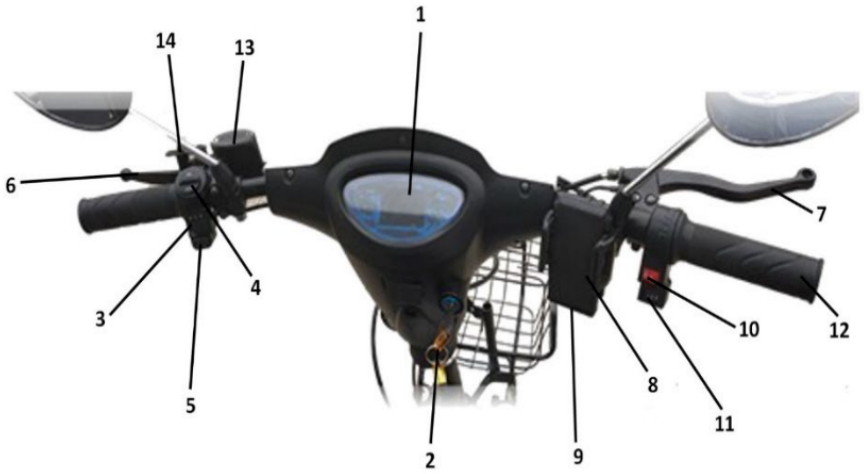
ETR5000	**ETR6000**
DIMENSIONS 7 x 3 x 3.7 Feet	DIMENSIONS 7 x 3.3 x 5.4 Feet
WEIGHT 265 Pounds	WEIGHT 570 Pounds
MOTOR 650W DC Brushless	MOTOR 1000W DC Brushless
DRIVING METHOD Rear Differential	DRIVING METHOD Rear Differential
FRAME 6061 Aluminum Alloy	FRAME 6061 Aluminum Alloy
CONTROLLER 48V35Ah 1000W Brushless	CONTROLLER 60V 50Ah 1500W Brushless
BRAKES Front: Drum	BRAKES Hydraulic Disc
Rear: Hydraulic Disc	BATTERY Type: 60V 45AhLithium-Ionn
BATTERY 48V 35AhLithium-Ionn	Battery Life: 2-3 Years
Battery Life: 2-3 Years	Charger: AC 71.4V 5.0A
Charger: AC 58.8V 5.0A	Charge Time: Up To 8 Hours
Charge Time: Up To 8 Hours	WHEELS 6061 Aluminum Alloy
WHEELS Rim Type: 6061 Aluminum Wheel	TIRES Front: 110/70-12
TIRES 3.00-10 Tubeless	Rear: 125/65-12
Maximum Climbing Capability: 20o	Maximum Climbing Capability: 20o
Maximum Load: 500 Pounds	Maximum Load: 500 Pounds
Maximum Speed: 18 Miles Per Hour	Maximum Speed: 20 Miles Per Hour
Maximum Range: 40-50 Miles	Maximum Range: 35-40 Miles
BUILT IN FEATURES LCD Display. Turn Signals, Horn, Headlight, Taillights, front and rear Storage Basket.	BUILT-IN FEATURES LCD Display. Turn Signals, Horn, Headlight, Taillights, front and rear Storage Basket.

GENERAL OVERVIEW

1.	Front Wheel/Tire	8.	Rear Tail Lamp
2.	Front Fender	9.	Rear Hub
3.	Basket	10.	Battery Compartment
4.	Front Headlight	11.	Rear Wheel/Tires
5.	Seat Cushions	12.	Mirrors
6.	Backrest	13.	Charging Outlet
7.	Storage Compartment	14.	Armrests
		15.	Cupholder (optional)

NOTE: This is a general depiction of a Pushpak. Parts above may differ from model to model in location, design, and availability. Please contact Pushpak Motors with any questions.

OVERVIEW – STEERING/CONTROLS



1.	Instrument Display, Battery Life Indicator, Speedometer, Trip Odometer	8.	Universal Phone Holder
2.	Ignition Switch	9.	USB Charging Port
3.	Turn Signals	10.	Forward/Reverse Switch
4.	Headlight Switch	11.	Speed Setting Switch
5.	Horn	12.	Throttle Controller
6.		13.	Brake Fluid Reservoir
7.	Right Hand Brake	14.	Parking Brake

NOTE: This is a general depiction of controls. Controls above may differ from model to model in location, availability, and variation of setting. Please contact Pushpak Motors with any questions.

ROUTINE INSPECTION BEFORE RIDING

 CAUTION

To ensure the optimal and safe performance of your Pushpak, it is essential to perform the following checks before every ride. Failure to do so could result in unsafe conditions, poor performance, and potential damage to your Pushpak.

1. Battery - Check the battery life indicator and charge, if needed. Your Pushpak can travel a max range of 50 miles on a full charge. To maximize use per trip, it is recommended you do not allow the battery capacity to decrease to less than 20%. When the battery is at 20% or lower, promptly charge the battery to full capacity.

   FIRST RIDE: Charge the battery to full capacity before your first ride.

2. Front/rear brakes – Ensure both the front and rear hand brakes engage effectively to bring the Pushpak to a complete stop.
3. Tires – Ensure all tires are at the recommended psi, ad that there is no damage or extreme wear that compromises their integrity.

   NOTE: Improper tire inflation can lead to dangerous conditions including, but not limited to, abnormal tire wear, tire slippage, and other compromises in vehicle performance.

4. Lights – Ensure the headlight, front/rear turn signals, taillights, including braking lights, function properly.
5. Instrument display – Make sure the display for battery life, speedometer, and odometer functions properly.
6. Horn – Make sure the horn sounds when pushed.
7. Parking brake – Make sure the parking brake effectively locks and releases the rear brakes.
8. Mirrors – Make sure both mirrors are correctly adjusted for peripheral viewing on either side.
9. Steering control/alignment –Ensure the steering column is stable and aligned and turns appropriately to the left and right.

10. Storage compartments – Check that the latches and keys on all storage compartments are secure. If applicable, make sure the rear seat is securely in the fully converted position.

OPERATING YOUR PUSHPAK

 CAUTION

Exercise due caution when operating your Pushpak in inclement weather and where conditions on the road, sidewalk, or other driving areas may be hazardous.

Although your Pushpak is weather-resistant, prolonged exposure to moisture can potentially cause a minor, temporary shut down in the vehicle's circuitry. This interruption will self-correct once the Pushpak is allowed to dry out sufficiently.

AVOID is taking turns sharply and at high speed. This can result in tipping the Pushpak.

NEVER drive your Pushpak through standing water! Immersion of the motor, battery, or other electrical components can cause short-circuited/or serious damage to those components.

1. IGNITION SWITCH

a. ON – To engage the electric motor and enable the Pushpak to be driven, insert the key into the ignition and turn to the right or ON position. The key cannot be removed while it is in the ON position.

b. OFF – To disengage the electric motor, turn the key to the left or OFF position. Power to the Pushpak will be turned off, and the key can then be removed.

II. FORWARD/REVERSE SWITCH

a. Forward – Depress the switch to the FORWARD (F) position to allow the Pushpak to drive on when the throttle controller is engaged.

b. Reverse – Depress the switch to the REVERSE (R) position to allow the Pushpak to drive in reverse when the throttle controller is engaged. For safety, this setting also activates a beeping sound as you drive in reverse to alert surrounding traffic of your movement.

2. SPEED SETTING SWITCH – 3 SETTINGS

Your Pushpak can travel at a maximum speed of 18 MPH. The speed setting switch regulates your top speed to safely or idea.

Accommodate driving conditions or your speed preference.

The speed settings below may be in REVERSE order on some Pushpak models. This can be determined by noting the speed difference between Setting 1 and Setting 3.

a. Setting 1 – Pushpak is limited to a maximum speed of 6 MPH. It is recommended that you use this setting when moving at a slow speed is safer or ideal for the driving conditions, e.g., driving up or down inclines.
b. Setting 2 – Pushpak is limited to a maximum speed of 12 MPH. It is recommended that you use this setting when moving at a moderate speed is safer or ideal for the driving conditions, e.g.,—inclement weather.
c. Setting 3 – Pushpak can travel up to the maximum speed of 18 MPH. It is recommended that you use this setting when driving conditions are ideal.

IV. THROTTLE CONTROLLER – RIGHT HANDLE

The throttle controls the flow of electrical power to the mot, or which propels the Pushpak.

d. Grasp the throttle and roll backward/towards you to propel the Pushpak.
e. Release the throttle to stop the Pushpak from continuing to propel.


CAUTION

Release of the throttle does NOT engage the braking system. T0 entirely stops the Pushpak from moving, and you must engage the brakes.

In addition to the speed settings, the current speed of the Pushpak within each speed setting can be regulated by adjusting the amount of roll of the throttle. Full roll to the throttle's stopping point allows the Pushpak to travel at the maximum speed within each speed setting.

V. TURNING

In the United States, bicyclists are required to use hand signals to alert surrounding traffic of their intention to turn or change lanes. Your Pushpak is equipped with left and right turn signals which may be used in place of hand signals for this purpose. If you opt not to use the turn signals, you must instead use proper hand signals.

a. No Signal – The turn signal switch should be in the center OFF position when not in use.

b. Left Turn/Lane Change – Before making a left turn or lane change, move the turn signal switch to the left. The front and rear left turn lights will blink, and a beeping sound will be audible. Move the turn signal switch back to the OFF position once you have completed your turn or lane change.

c. Right Turn/Lane Change – Before making a right turn or lane change, move the turn signal switch to the right. The front and rear right turn lights will blink, and a beeping sound will be audible. Move the turn signal switch back to the OFF position once you have completed your turn or lane change.

 CAUTION

Avoid taking turns sharply and at high speed. This can result in tipping the Pushpak.

VI. SLOWING DOWN/BRAKING

In the United States, bicyclists are required to use a hand signal to alert surrounding traffic of their intention to slow down or
Stop. Your Pushpak is equipped with rear braking lights, which activate when you engage either hand brake or which may be used in place of the hand signal. If the rear braking lights are not functional, you should have the Pushpak serviced immediately for repair. The proper hand signal must be used if riding the Pushpak without rear braking lights.

a. Braking: Release the throttle and squeeze both the front and rear hand brakes with equal pressure until the Pushpak comes to a complete stop.

b. Slow Down: Release the throttle and squeeze both the front and rear hand brakes with enough equal pressure to slow the Pushpak down to the desired speed.

VII. INSTRUMENT DISPLAY

a. Speedometer – Displays your current speed.

   Note: Travel speed is impacted by the speed setting you select. Refer to section III—speed Setting Switch for more information.

b. Battery Life Indicator – Displays the current battery life in bars and voltage.

c. Trip Odometer – Displays the mileage per trip/ignition.

VIII. HEADLIGHT

The headlight can be used whenever low visibility in natural light compromises the safe operation of your Pushpak.

a. To turn the headlight on, move the switch to the ON position.

b. To turn the headlight off, move the switch to the OFF position.

NOTE: On some models, the brightness of the headlight can also be adjusted.

IX. PARKING/PARKING BRAKE

When your Pushpak is not in use, engage the parking brake to ensure no movement.

a. Once the Pushpak is brought to a full stop, turn the key in the OFF position's ignition.

b. Engage the parking brake to ensure the brakes are locked:

   a. Squeeze the left-hand brake thoroughly, ag, and it holds in place.

   b. Push down the pin past the bottom of the handle.

   c. Swing the lock tab over the pin to secure the hand brake in the braking position.

c. Remove the key from the ignition.

d. To disengage the parking brake:

   a. Swing the lock tab away from the pin and hold.

   b. Push the pin down disengage, and the pin will pop up. This will release the hand brake from the braking position.

Pushpak offers various onboard storage options including basket under-seat compartments and convertible seats.

a. Use the provided mechanisms of the latch or keyed lock to open and to lock storage.

b. For a seat that converts to a flatbed, ensure the rear seat is securely in a locked position when used as a seat.

XI. HORN

To sound the horn, push down on the horn button.

XII. USB Charging Port

The USB charging port can be found beneath the universal phone holder. If an adaptor is provided to connect the USB charging port to the main Pushpak charging outlet, dependingg on your Pushpak model.

XIII. ETR500HT Exclusive Features

The following features come standard only on the ETR500HT model.

a. AM/FM Radio and MP3 player

i. The power button turns the radio/mp3 player on/off.

ii. The mode button changes the mode to the auto th M or FM) or MP3 mode.

iii. The play/pause button plays or pauses the MP3 player.

iv. The back and forward buttons scrolls through and selects files in your MP3 library.

v. The volume buttons increase or decrease the volume of the radio/mp3 player.

b. Windshield/Windshield Wiper

To clean the windshield, push the windshield wiper button to turn the wiper on/off.

IV. Key Fob Controls

The ETR100 comes equipped with a key fob controller that allows you to engage the alarm system or briefly sound the alarm. NOTE: The alarm system does not lock the wheels, but simply emits a series of loud beeps to alert you.

CHARGING YOUR PUSHPAK/BATTERY INFORMATION

Your Pushpak comes with a battery charger. DO NOT use other chargers to charge your Pushpak. Use the battery life indicator on the Pushpak instrument display to gauge the battery life. To maximize use per trip, do not allow the battery life to decrease to less than 20%. When the battery life is at 20% or lower, promptly charge the battery to full capacity.

FIRST RIDE: Charge the battery to full capacity before you take your first ride.

 CAUTION

Take reasonable precautions when charging and NEVER use the charger in a damp environment or in the presence of combustible items.

The charger may become hot during the charging process. To prevent a potential fire hazard, NEVER cover the charger while charging to allow for the dissipation of heat.

If you encounter any difficulty charging your Pushpak or experience unusual occurrences in the charging process, immediately shut off the power and contact Pushpak Motors or authoan burron rized service vendor for service.

Avoid getting any liquid around the battery as this can potentially cause leakage, overheating smoke ,and possible explosion.

I. CHARGING THE BATTERY

a. Turn the ignition switch to the OFF position and remove the key. DO NOT charge the Pushpak with the ignition in the ON position.

b. Make sure the battery power cable inside the battery compartment is securely plugged into the battery.

c. Make sure the battery switch inside the battery compartment is in the ON position and that all attached wires are secure.

NOTE: Some models of Pushpak have no battery switch. In this case step right to d. below.

d. Plug the receptacle (female) end of the charger power cable into the Pushpak charging outlet.
e. Plug the charger power cable into a standard household AC 110V outlet.12

NOTE: To protect the Pushpak from potential damage as a result of power surges, it is strongly recommended that a surge protective device is used when plugging into a standard household AC 110V outlet. Damage resulting from a power surge is not covered by the warranty.

f. Charger Light Indicators

When the charger power cable is plugged in, the charger box light will be activated.

1. A red light on the charger box indicates that the battery is not fully charged, but that there is a proper connection, and the battery is receiving an electrical charge. Full charge can take up to 8 hours depending on the level of depletion in the battery.
2. A flashing green light on the charger box indicates that your Pushpak is nearly fully charged.
3. A solid green light on the charger box indicates you're your Pushpak is fully charged. Promptly unplug the charger once the green light is displayed.

II. BATTERY INFORMATION & SAFEGUARD

The lithium ion battery that comes with your Pushpak can last over 1000 charges or 2 to 3 years with average use and proper care. Do not use the battery for any other purpose than to power your Pushpak. Do not attempt to disassemble or modify the battery.

The battery is equipped with battery circuit protection which safeguards the battery from overcharging. If any electrical functions on your Pushpak are not properly working, the battery will automatically shut off. If this occurs, follow the steps below to reset your Pushpak:

a. Turn the ignition to the OFF position.

b. Turn the battery switch to the OFF position and then back to the ON position.

NOTE: Some Pushpak models do not have a battery switch. In this case, skip to step c. below.

c. To start your Pushpak, turn the ignition to the ON position.

III. BATTERY INSTALLATION

It is advisable that you seek assistance from a qualified technician for battery installation service. Proceed with caution.

a. Make sure the ignition is in the OFF position and the key is removed.

b. Make sure the charger cable is unplugged from the Pushpak.

c. Turn the battery switch in the battery compartment to the OFF position.

NOTE: Some Pushpak models do not have a battery switch. In this case, go to step d. through h. below, skip step I., and continue with remaining steps.

Turning the battery switch OFF does not completely shut off the electrical system. Be sure to unplug the battery power cable before attempting battery installation or repair of the electrical system.

d. Unplug the battery cable in the battery compartment.

e. Unfasten all screws and the bar that holds the battery in place and then remove the battery.

f. Insert the new battery, ensuring the polarity of the battery is correctly aligned; incorrect alignment will prevent proper charging and operation of your Pushpak.

g. Make sure battery is securely fastened in place.

h. Securely plug the battery cable into the battery.

i. Turn the battery switch to the ON position.

j. Insert the key and turn the ignition to the ON position to view the battery life indicator. If the battery requires charging, plug in the charger until the battery is fully charged.

PREVENTATIVE MAINTENANCE

All vehicles experience some level of wear over the course of operation. In addition to performing the Routine Inspection listed in this manual, it is recommended that you perform preventative maintenance to further ensure the optimal performance and service life of your vehicle, and for your safety. If you are uncertain of how to perform any of the following preventative maintenance, seek professional service. Preventative maintenance should include the following:

I. GENERAL MAINTENANCE

a. Keep the motor differential clean to insure proper acceleration and dynamic performance.

b. Make sure the throttle rotates freely.

c. Make sure the hand brakes and parking brake are operational, including inspection of the brake shoes for extreme wear or friction when applied.

d. Inspect the front and rear shock absorbers for damage and insure both are functioning properly.

e. Make sure all tires are properly inflated to the recommended psi.

f. Inspect all electrical components to make sure they are functioning properly.

g. Make sure all fasteners and screws are tightly secured throughout the Pushpak body.

h. Keep your Pushpak vehicle clean as a buildup of dirt and other substances can impair proper functioning.

i. Make sure all lubrication points are well-oiled. Do not allow oil to leak onto the Pushpak.

j. Make sure the battery power cable and any attached wires within the battery compartment are secure.

J. FRONT BRAKE INSPECTION AND ADJUSTMENT

It is essential that the rear brake system, which is engaged by squeezing the left brake handle, be properly adjusted to allow for adequate clearance while the Pushpak is moving, but still allow for effective braking. This system is either drum or disc depending on your Pushpak model. Follow the appropriate inspection and adjustments applicable to your Pushpak.

a. Drum Brake System – ETR200/ETR300/ETR400/ETR500HT to adjust the clearance on the front brake:

1. Locate the cable wire and nut connected to the front wheel.
2. Turn the nut clockwise to tighten the clearance or counterclockwise to loosen the clearance.

When properly adjusted, the front wheel should turn without any resistance, and the right hand brake should effectively engage the front brake.

b. Disc Brake System – ETR100

Refer to III. Rear Brake Inspection and Adjustment, b. Disc Brake System for instruction.

K. REAR BRAKE INSPECTION AND ADJUSTMENT

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It is essential that the rear brake system that is engaged by squeezing the left brake handle, be properly adjusted to allow for adequate clearance while the Pushpak is traveling, but still allow for effective braking. This system is either drum or disc brakes depending on your Pushpak model. Follow the appropriate inspection and adjustments applicable to your Pushpak's rear braking system.

a. Drum Brake System – ETR100

The rear brakes should have a brake pedal free stroke of 10-20 mm. If the brake pedal free stroke is too light, braking power will be impaired. If the brake pedal free stroke is too heavy, this may lead to impaired driving and accelerated wear of the brake shoes. If upon inspection, adjustment is needed, take the following steps for both rear brakes:

1. Loosen the rear brake lever lock nut.
2. Turn the rear brake to adjust the nut.
    i. Turn the nut clockwise to reduce the free stroke clearance.
    ii. Turn the nut counterclockwise to increase the free stroke clearance.
3. Tighten the nut once the desired free stroke clearance is achieved.

b. Disc Brake System – ETR200/ETR300/ETR400/ETR500HT

NOTE: This section also applies to the FRONT brake system for the ETR100 model.

The disc brake system includes brake fluid/oil and is engaged by squeezing the left brake handle, where the brake fluid/oil reservoir is also located. It can be inspected and maintained as follows:

Check the brake fluid/oil level in the reservoir. If the level falls below the bottom score line, add ONLY either DOT3 or DOT4 brake fluid/oil until it reaches the upper score line.

NOTE: A drop in the brake fluid/oil level indicates potential plate friction, brake disc wear or brake fluid leakage, and further inspection into these potential issues is needed.

If the brake fluid/oil changes color, replace it with new braking fluid/oil.

c. Check the friction plate and brake disc wear condition. When any of the friction plates is worn down to the marking line of 3mm or 3.5mm, it must be replaced in pairs. The disc brake thickness and wear limits may differ slightly from Pushpak model to model.

d. If the left brake handle is spongy or has little resistance or effectiveness when squeezed, exhaust the left brake system as follows:

    i. Remove the main cylinder cover and add brake fluid/oil until the fluid level reaches the upper score line. Close the cover to prevent debris from entering.

    ii. Use a hose with one end connected to the caliper oil drain screw and the other end to an appropriate container.

    iii. Quickly squeeze and release the left hand brake a few times, and then hold the hand brake in place on the last squeeze.

    iv. While the hand brake is being held in place, loosen the air release screw by turning it counterclockwise one quarter inch. This will allow any foamed brake fluid/oil to be released through the hose and into the container.

    v. Tighten the air release screw.

    vi. Repeat steps 3 through 5 until all of the foaming brake fluid/oil is emptied and the brake handle is no longer spongy and has proper resistance and effectiveness.

    vii. Tighten the drain screw and disconnect the drainpipe.

    viii. Add brake fluid/oil to the main cylinder until it reaches the upper score line. Close the cover.

NOTE: Clean any spilled brake fluid/oil immediately as it can corrode painted surfaces, plastic, rubber parts, etc. Brake fluid/oil should always remain visible in the viewing window of the reservoir during the exhausting process. To insure this, add brake fluid/oil to the main cylinder at any time during the process.

M. SHOCK ABSORBERS

a. Rear shock absorbers – Inspect the rear shock absorbers after every 125 miles of use. Replace the shock absorbers immediately if looseness or cracks are found.

b. Front shock absorbers – Inspect the front shock absorbers regularly. Replace the shock absorbers immediately if damage or failure is found.

   Note: The front fork should be kept clean to insure proper functioning of the front shock absorbers.

N. TIRES AND WHEELS

a. Inspect the tires for cuts, embedded objects or other conditions/damage that can compromise the tires' performance.

b. Inspect the tires for proper inflation. This inspection should always be performed while the tires are "cold" before driving the vehicle. Recommended tire pressure varies on each model:

   ETR1000 - 43 PSI ETR2000/ETR3000 - 36 PSI

   ETR4000 - Front 44-55 PSI, Rear 36 PSI ETR500HT - 36 PSI

c. Inspect the wheel rims for dents or distortions that can adversely affect the tires' inflation or performance.

O. REAR AXLE

a. Inspect the rear axle differential every week for proper function. Gear oil in the axle should be changed approximately every 650 miles.

b. Add gear oil, if needed for proper lubrication.

c. For cold weather, use 80w/90 GL-3 gear oil. For warm weather, use 85w/90 GL-3 gear oil.

P. BATTERY

a. Check the battery wiring and cable regularly to insure they are secure; any looseness can cause potential damage to the circuit virtual access.

b. It is recommended that you do not discharge the battery to less than 20%. Once the battery has been discharged, it should be promptly charged.

c. If the battery shows signs of warping or becomes very hot, stop use immediately.

Q. STORAGE OF YOUR PUSHPAK/CHARGER

a. Store under cover that protects the Pushpak from prolonged exposure to the elements; such exposure can cause mechanical failure and decrease the service life of your Pushpak.

b. When storing your Pushpak for an extended period, charge the battery at least once per month. The recommended storage temperature is 60 degrees Fahrenheit and at 40% battery capacity.

   NOTE: Storing your battery in temperatures below 32 degrees Fahrenheit or above 97 degrees Fahrenheit can limit your battery life.

c. Charger Storage

   When not in use, store the charger in a dry, cool and clean place, taking care to ensure the ventilation holes do not become clogged by dust or other debris.

   Battery - Check the battery life indicator and charge, if needed. Your Pushpak can travel a max range of 50 miles on a full charge. To maximize use per trip, it is recommended you do not allow the battery capacity to decrease to less than 20%. When the battery is at 20% or lower, promptly charge the battery to full capacity.

   FIRST RIDE: Charge the battery to full capacity before your first ride.

d. Front/rear brakes – Ensure both the front and rear hand brakes engage effectively to bring the Pushpak to a complete stop.

e. Tires – Ensure all tires are at the recommended psi, ad that there is no damage or extreme wear that compromises their integrity.

f. NOTE: Improper tire inflation can lead to dangerous conditions including, but not limited to, abnormal tire wear, tire slippage, and other compromises in vehicle performance.

g. Lights – Ensure the headlight, front/rear turn signals, taillights, including braking lights, function properly.

h. Instrument display – Make sure the display for battery life, speedometer, and odometer functions properly.

i. Horn – Make sure the horn sounds when pushed.
j. Parking brake – Make sure the parking brake effectively locks and releases the rear brakes.
k. Mirrors – Make sure both mirrors are correctly adjusted for peripheral viewing on either side.
l. Steering control/alignment –Ensure the steering column is stable and aligned and turns appropriately to the left and right.
m. Storage compartments – Check that the latches and keys on all storage compartments are secure. If applicable, make sure the rear seat is securely in the fully converted position.

OPERATING YOUR PUSHPAK

 CAUTION

Exercise due caution when operating your Pushpak in inclement weather and where conditions on the road, sidewalk, or other driving areas may be hazardous.

Although your Pushpak is weather-resistant, prolonged exposure to moisture can potentially cause a minor, temporary shut down in the vehicle's circuitry. This interruption will self-correct once the Pushpak is allowed to dry out sufficiently.

AVOID is taking turns sharply and at high speed. This can result in tipping the Pushpak.

NEVER drive your Pushpak through standing water! Immersion of the motor, battery, or other electrical components can cause short-circuited/or serious damage to those components.

I. IGNITION SWITCH

a. ON – To engage the electric motor and enable the Pushpak to be driven, insert the key into the ignition and turn to the right or ON position. The key cannot be removed while it is in the ON position.

b. OFF – To disengage the electric motor, turn the key to the left or OFF position. Power to the Pushpak will be turned off, and the key can then be removed.

J. FORWARD/REVERSE SWITCH

a. Forward – Depress the switch to the FORWARD (F) position to allow the Pushpak to drive on when the throttle controller is engaged.

b. Reverse – Depress the switch to the REVERSE (R) position to allow the Pushpak to drive in reverse when the throttle controller is engaged. For safety, this setting also activates a beeping sound as you drive in reverse to alert surrounding traffic of your movement.

K. SPEED SETTING SWITCH – 3 SETTINGS

Your Pushpak can travel at a maximum speed of 18 MPH. The speed setting switch regulates your top speed for safety.

 CAUTION

Release of the throttle does NOT engage the braking system. T0 entirely stops the Pushpak from moving, and you engage the brakes.

c. In addition to the speed settings, the current speed of the Pushpak within each speed setting can be regulated by adjusting the amount of roll of the throttle. Full roll to the throttle's stopping point allows the Pushpak to travel at the maximum speed within each speed setting

V. TURNING

In the United States, bicyclists are required to use hand signals to alert surrounding traffic of their intention to turn or change lanes. Your Pushpak is equipped with left and right turn signals which may be used in place of hand signals for this purpose. If you opt not to use the turn signals, you must instead use proper hand signals.

a. No Signal – The turn signal switch should be in the center OFF position when not in use.

b. Left Turn/Lane Change – Before making a left turn or lane change, move the turn signal switch to the left. The front and rear left turn lights will blink, and a beeping sound will be audible. Move the turn signal switch back to the OFF position once you have completed your turn or lane change.

c. Right Turn/Lane Change – Before making a right turn or lane change, move the turn signal switch to the right. The front and rear right turn lights will blink, and a beeping sound will be audible. Move the turn signal switch back to the OFF position once you have completed your turn or lane change.

 CAUTION

Avoid taking turns sharply and at high speed. This can result in tipping the Pushpak.

W. SLOWING DOWN/BRAKING

In the United States, bicyclists are required to use a hand signal to alert surrounding traffic of their intention to slow down or
Stop. Your Pushpak is equipped with rear braking lights, which activate when you engage either hand break or which may be used in place of the hand signal. If the rear braking lights are not functional, you should have the Pushpak serviced immediately for repair. The proper hand signal must be used if riding the Pushpak without rear braking lights.

a. Braking: Release the throttle and squeeze both the front and rear hand brakes with equal pressure until the Pushpak comes to a complete stop.
b. Slow Down: Release the throttle and squeeze both the front and rear hand brakes with enough equal pressure to slow the Pushpak down to the desired speed.

X. INSTRUMENT DISPLAY

a. Speedometer – Displays your current speed.

   Note: Travel speed is impacted by the speed setting you select. Refer to section III Speed Setting Switch for more information.

b. Battery Life Indicator – Displays the current battery life in bars and voltage.
c. Trip Odometer – Displays the mileage per trip/ignition.

Y. HEADLIGHT

The headlight can be used whenever low visibility in natural light compromises the safe operation of your Pushpak.

a. To turn the headlight on, move the switch to the ON position.
b. To turn the headlight off, move the switch to the OFF position.

NOTE: On some models, the brightness of the headlight can also be adjusted.

Z. PARKING/PARKING BRAKE

When your Pushpak is not in use, engage the parking brake to ensure no movement.

a. Once the Pushpak is brought to a full stop, turn the key in the OFF position's ignition.

b. Engage the parking brake to ensure the brakes are locked:

   a. Squeeze the left-hand brake thoroughly, ag, and it holds in place.

   b. Push down the pin past the bottom of the handle.

   c. Swing the lock tab over the pin to secure the hand brake in the braking position.

c. Remove the key from the ignition.

d. To disengage the parking brake:

   a. Swing the lock tab away from the pin and hold.

   b. Push the pin down disengage the and the pin will pop up. This will release the hand brake from the braking position.

AA. STORAGE

Pushpak offers various onboard storage ,options including basket under-seat compartments and convertible seats.

a. Use the provided mechanisms the of latch or keyed lock to open and to lock storage.

b. For a seat that converts to a flatbed, ensure the rear seat is securely in locked position when used as a seat.

BB. HORN

To sound the horn, push down on the horn button.

CC. USB CHARGING PORT

The USB charging port can be found either beneath the universal phone holder or an adaptor is provided for connecting the USB charging port to the main Pushpak charging outlet for power depending on your Pushpak model.

DD. ETR5000HT EXCLUSIVE FEATURES

The following features come standard only on the ETR500HT model.

a. AM/FM Radio and MP3 player

i. The power button turns the radio/mp3 player on/off.

ii. The mode button changes the mode to radio (AM or FM) or MP3 mode.

iii. The play/pause button plays or pauses the MP3 player.

iv. The back and forward buttons scrolls through and selects files in your MP3 library.

v. The volume buttons increase or decrease the volume of the radio/mp3 player.

b. Windshield/Windshield Wiper

To clean the windshield, push the windshield wiper button to turn wiper on/off.

EE. KEY FOB CONTROLS

The ETR1000 comes equipped with a key fob controller that allows you to engage the alarm system or briefly sound the alarm.

NOTE: The alarm system does not lock the wheels, but simply emits a series of loud beeps to alert you to disturbance of the Pushpak.

CHARGING YOUR PUSHPAK/BATTERY INFORMATION

Your Pushpak comes with a battery charger. DO NOT use other chargers to charge your Pushpak. Use the battery life indicator on the Pushpak instrument display to gauge the battery life. To maximize use per trip, do not allow the battery life to decrease to less than 20%. When the battery life is at 20% or lower, promptly charge the battery to full capacity.

FIRST RIDE: Charge the battery to full capacity before you take your first ride.

 CAUTION

Take reasonable precautions when charging and NEVER use the charger in a damp environment or in the presence of combustible items.

The charger may become hot during the charging process. To prevent a potential fire hazard, NEVER cover the charger while charging to allow for the dissipation of heat.

If you encounter any difficulty charging your Pushpak or experience unusual occurrences in the charging process, immediately shut off the power and contact Pushpak Motors or authorized service vendor for service.

Avoid getting any liquid around the battery as this can potentially cause leakage, overheating smoke and possible explosion.

I. CHARGING THE BATTERY

a. Turn the ignition switch to the OFF position and remove the key. DO NOT charge the Pushpak with the ignition in the ON position.

b. Make sure the battery power cable inside the battery compartment is securely plugged into the battery.

c. Make sure the battery switch inside the battery compartment is in the ON position and that all attached wires are secure.

NOTE: Some models of Pushpak have no battery switch. In this case, skip to step d. below.

d. Plug the receptacle (female) end of the charger power cable into the Pushpak charging outlet.

e. Plug the charger power cable into a standard household AC 110V outlet.

NOTE: To protect the Pushpak from potential damage as a result of power surges, it is strongly recommended that a surge protective device is used when plugging into a standard household AC 110V outlet. Damage resulting from a power surge is not covered by the warranty.

Charger Light Indicators

f. When the charger power cable is plugged in, the charger box light will be activated.

g. A red light on the charger box indicates that the battery is not fully charged

h. A flashing green light on the charger box indicates that your Pushpak is nearly fully charged.

i. A solid green light on the charger box indicates you're your Pushpak is fully charged.

j. Promptly unplug the charger once the green light is displayed.

II. BATTERY INFORMATION & SAFEGUARD

The lithium ion battery that comes with your Pushpak can last over 1000 charges or 2 to 3 years with average use and proper care. Do not use the battery for any other purpose than to power your Pushpak. Do not attempt to disassemble or modify the battery.

The battery is equipped with battery circuit protection which safeguards the battery from overcharging. If any electrical functions on your Pushpak are not properly working, the battery will automatically shut off. If this occurs, follow the steps below to reset your Pushpak:

a. Turn the ignition to the OFF position.

b. Turn the battery switch to the OFF position and then back to the ON position.

NOTE: Some Pushpak models do not have a battery switch. In this case, skip to step c. below.

c. To start your Pushpak, turn the ignition to the ON position.

 CAUTION

It is advisable that you seek assistance from a qualified technician for battery installation service. Proceed with caution.

a. Make sure the ignition is in the OFF position and the key is removed.

b. Make sure the charger cable is unplugged from the Pushpak.

c. Turn the battery switch in the battery compartment to the OFF position.

NOTE: Some Pushpak models do not have a battery switch. In this case, go to step d. through h. below, skip step I., and continue with remaining steps.

 CAUTION

Turning the battery switch OFF does not completely shut off the electrical system. Be sure to unplug the battery power cable before attempting battery installation or repair of the electrical system.

d. Unplug the battery cable in the battery compartment.

e. Unfasten all screws and the bar that holds the battery in place and then remove the battery.

f. Insert the new battery, ensuring the polarity of the battery is correctly aligned; incorrect alignment will prevent proper charging and operation of your Pushpak.

g. Make sure battery is securely fastened in place.

h. Securely plug the battery cable into the battery.

i. Turn the battery switch to the ON position.

j. Insert the key and turn the ignition to the ON position to view the battery life indicator. If the battery requires charging, plug in the charger until the battery is fully charged.

k. Properly dispose of the old battery according to the laws of your local jurisdiction

PREVENTATIVE MAINTENANCE

All vehicles experience some level of wear over the course of operation. In addition to performing the Routine Inspection listed in this manual, it is recommended that you perform preventative maintenance to further ensure the optimal performance and service life of your vehicle, and for your safety. If you are uncertain of how to perform any of the following preventative maintenance, seek professional service. Preventative maintenance should include the following:

I. GENERAL MAINTENANCE

a. Keep the motor differential clean to insure proper acceleration and dynamic performance.

b. Make sure the throttle rotates freely.

c. Make sure the hand brakes and parking brake are operational, including inspection of the brake shoes for extreme wear or friction when applied.

d. Inspect the front and rear shock absorbers for damage and insure both are functioning properly.

e. Make sure all tires are properly inflated to the recommended psi.

f. Inspect all electrical components to make sure they are functioning properly.

g. Make sure all fasteners and screws are tightly secured throughout the Pushpak body.

h. Keep your Pushpak vehicle clean as a buildup of dirt and other substances can impair proper functioning.

i. Make sure all lubrication points are well-oiled. Do not allow oil to leak onto the Pushpak.

j. Make sure the battery power cable and any attached wires within the battery compartment are secure.

J. FRONT BRAKE INSPECTION AND ADJUSTMENT

It is essential that the rear brake system, which is engaged by squeezing the left brake handle, be properly adjusted to allow for adequate clearance while the Pushpak is moving, but still allow for effective braking. This system is either drum or disc depending on your Pushpak model. Follow the appropriate inspection and adjustments applicable to your P

Drum Brake System – ETR200/ETR300/ETR400/ETR500HT

To adjust the clearance on the front brake:

1. Locate the cable wire and nut connected to the front wheel.
2. Turn the nut clockwise to tighten the clearance or counterclockwise to loosen the clearance.

   When properly adjusted, the front wheel should turn without any resistance, and the right hand brake should effectively engage the front brake.

b. Disc Brake System – ETR100

Refer to III. Rear Brake Inspection and Adjustment, b. Disc Brake System for instruction.

K. REAR BRAKE INSPECTION AND ADJUSTMENT

It is essential that the rear brake system that is engaged by squeezing the left brake handle, be properly adjusted to allow for adequate clearance while the Pushpak is traveling, but still allow for effective braking. This system is either drum or disc brakes depending on your Pushpak model. Follow the appropriate inspection and adjustments applicable to your Pushpak's rear braking system.

a. Drum Brake System – ETR100

The rear brakes should have a brake pedal free stroke of 10-20 mm. If the brake pedal free stroke is too light, braking power will be impaired. If the brake pedal free stroke is too heavy, this may lead to impaired driving and accelerated wear of the brake shoes. If upon inspection, adjustment is needed, take the following steps for both rear brakes:

1. Loosen the rear brake lever lock nut.
2. Turn the rear brake to adjust the nut.
   i. Turn the nut clockwise to reduce the free stroke clearance.
   ii. Turn the nut counterclockwise to increase the free stroke clearance.
3. Tighten the nut once the desired free stroke clearance is achieved.

b. Disc Brake System – ETR200/ETR300/ETR400/ETR500HT

NOTE: This section also applies to the FRONT brake system for the ETR100 model.

The disc brake system includes brake fluid/oil and is engaged by squeezing the left brake handle, where the brake fluid/oil reservoir is also located. It can be inspected and maintained as follows:

1. Check the brake fluid/oil level in the reservoir. If the level falls below the bottom score line, add ONLY either DOT3 or DOT4 brake fluid/oil until it reaches the upper score line.

   NOTE: A drop in the brake fluid/oil level indicates potential plate friction, brake disc wear or brake fluid leakage, and further inspection into these potential issues is needed.

2. If the brake fluid/oil changes color, replace it with new braking fluid/oil.

3. Check the friction plate and brake disc wear condition. When any of the friction plates is worn down to the marking line of 3mm or
   3.5mm, it must be replaced in pairs. The disc brake thickness and wear limits may differ slightly from Pushpak model to model.

4. If the left brake handle is spongy or has little resistance or effectiveness when squeezed, exhaust the left brake system as follows:

   i. Remove the main cylinder cover and add brake fluid/oil until the fluid level reaches the upper score line. Close the cover to prevent debris from entering.

   ii. Use a hose with one end connected to the caliper oil drain screw and the other end to an appropriate container.

   iii. Quickly squeeze and release the left hand brake a few times, and then hold the hand brake in place on the last squeeze.

   iv. While the hand brake is being held in place, loosen the air release screw by turning it counterclockwise one quarter inch. This will allow any foamed brake fluid/oil to be released through the hose and into the container.

   v. Tighten the air release screw.

   vi. Repeat steps 3 through 5 until all of the foaming brake fluid/oil is emptied and the brake handle is no longer spongy and has proper resistance and effectiveness.

   vii. Tighten the drain screw and disconnect the drainpipe.

   viii. Add brake fluid/oil to the main cylinder until it reaches the upper score line.

   ix. Close the cover.

NOTE: Clean any spilled brake fluid/oil immediately as it can corrode painted surfaces, plastic, rubber parts, etc. Brake fluid/oil should always remain visible in the viewing window of the reservoir during the exhausting process. To insure this, add brake fluid/oil to the main cylinder at any time during the process.

L. SHOCK ABSORBERS

a. Rear shock absorbers – Inspect the rear shock absorbers after every 125 miles of use. Replace the shock absorbers immediately if looseness or cracks are found.

b. Front shock absorbers – Inspect the front shock absorbers regularly. Replace the shock absorbers immediately if damage or failure is found.

Note: The front fork should be kept clean to insure proper functioning of the front shock absorbers.

M. TIRES AND WHEELS

a. Inspect the tires for cuts, embedded objects or other conditions/damage that can compromise the tires' performance.

b. Inspect the tires for proper inflation. This inspection should always be performed while the tires are "cold" before driving the vehicle. Recommended tire pressure varies on each model:

ETR1000 - 43 PSI ETR2000/ETR3000 - 36 PSI

ETR400 - Front 44-55 PSI, Rear 36 PSI ETR500HT - 36 PSI

c. Inspect the wheel rims for dents or distortions that can adversely

d.

e. Inspect the rear axle differential every week for proper function. Gear oil in the axle should be changed approximately every 650 miles.

a. Add gear oil, if needed for proper lubrication.

b. For cold weather, use 80w/90 GL-3 gear oil. For warm weather, use 85w/90 GL-3 gear oil.

N. BATTERY

a. Check the battery wiring and cable regularly to insure they are secure; any looseness can cause potential damage to the circuit virtual access.

b. It is recommended that you do not discharge the battery to less than 20%. Once the battery has been discharged, it should be promptly charged.

c. If the battery shows signs of warping or becomes very hot, stop use immediately.

O. STORAGE OF YOUR PUSHPAK/CHARGER

a. Store under cover that protects the Pushpak from prolonged exposure to the elements; such exposure can cause mechanical failure and decrease the service life of your Pushpak.

b. When storing your Pushpak for an extended period, charge the battery at least once per month. The recommended storage temperature is 60 degrees Fahrenheit and at 40% battery capacity.

   NOTE: Storing your battery in temperatures below 32 degrees Fahrenheit or above 97 degrees Fahrenheit can limit your battery life.

c. Charger Storage

   When not in use, store the charger in a dry, cool and clean place, taking care to ensure the ventilation holes do not become clogged by dust or other debris.