

eTuk Platform Passenger & eTuk Platform Cargo

User manual and maintenance guide

Vehicle Identification Number (VIN) starts with XN7TP or XN7CP

Version number: TP01 Rev2

Version release date: February 2023 Keep this booklet with your vehicle





Congratulations on purchasing your new e-Tuk!

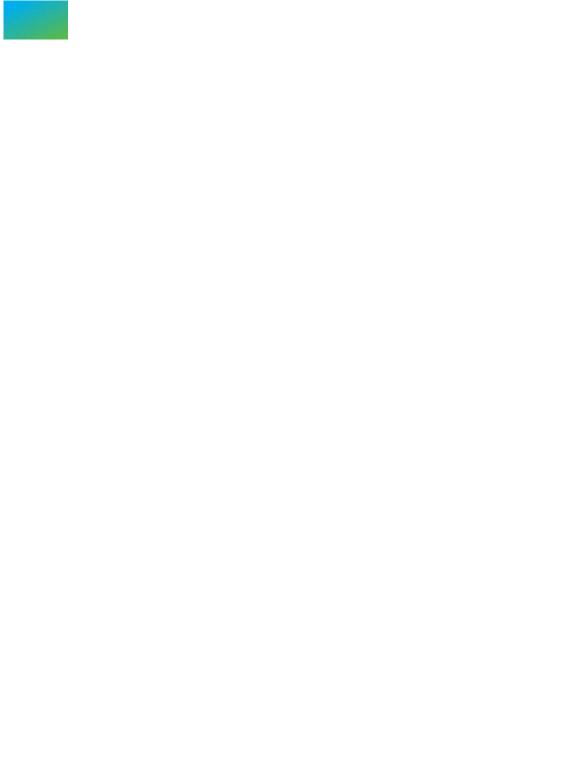
You probably cannot wait to start driving! However, please read this manual carefully before you get started. This will enable you to be informed about how to fully take advantage of the capabilities of the vehicle.

Reading and understanding this manual is essential for both your own safety and the safety of your passengers. It also provides useful information for troubleshooting any errors that the vehicle may have.

If you take good care of your vehicle, it will always be in the utmost condition. Keep track of your maintenance in this booklet and follow the maintenance schedule.

Please check our website www.etukfactory.com for an electronic copy of the latest version of this manual.

Thank you and enjoy your e-Tuk! The E-Tuk Factory team





Quick Start Guide

1. Unplug

Before driving off, make sure the vehicle is not being charged. The e-Tuk should not be able to drive while you are charging. Place the charging cable securely under the rear seats.





2. Direction switch

Put the direction switch in neutral N, and make sure the throttle is not engaged.

3. Key

Turn the key clockwise.



4. Display turns on

The display (BDI) will switch on.

Check the state of charge and Ub or system voltage. The lithium battery is full at 80.5V.

NB For new vehicles the BDI could take up to 24h on the first charge to show a 100% conditions

eTuk Limo GT & Vendo GT

Quick Start Guide



5. Parking brake

Make sure the parking brake is released.

Put your left foot on the park brake pedal - press slightly and pull the Park brake release button



6. Put in D or R



Do not forget to put on your seatbelt before you start driving.

Put the direction switch in D to drive forwards and R to drive backwards.

Gently twist the throttle and enjoy your ride!

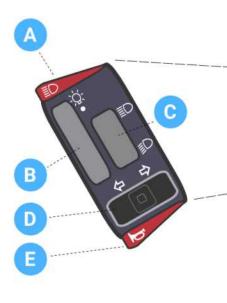


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Dashboard and handlebar

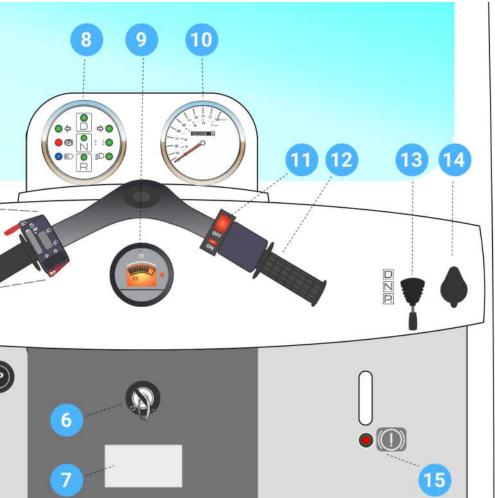


- A Main beam flasher
- B Headlights power supply
- C Main beam & passing beam
- D Turn signal
- E Horn
- *Please turn off when storing vehicle
- **Push park brake pedal lightly to release

- 1 Windscreen washer
- 2 Windscreen wiper
- 3 Hazard lights
- 4 Windscreen washer tank (with peeking hole)
- 5 Park brake release button**







- 6 Key switch (and steer lock)
- 7 Manufacturer's VIN plate
- 8 Tell tales display
- 9 Battery indicator (BDI)
- 10 Speedo- & Odometer

- 11 Emergency kill switch
- 12 Throttle
- 13 Drive/Neutral/Reverse switch
- 14 12V outlet

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15 - Brake fluid LED

(with peeking hole)







By pressing the brake pedal with your right foot you will engage the friction brakes. Slowing down and stopping your vehicle can also be done by braking with the motor alone. You can slow down without even using the brake pedal. This process also recharges the battery and therefore extends the driving range.

Throttle

Turn the throttle to accelerate. By releasing it the vehicle will automatically use the motor to slow down and stop. The easier you are on the throttle and brakes, the further one single battery charge will take you.





Handlebar Switch

Familiarize yourself with the controls on the handlebar switch before you start driving.

Headlamps

Please note that for safety reasons, the position lights are always on. You'll notice that the center headlight cannot be switched on. EU-regulation states that you are not allowed to drive on public roads with three headlights.





BDI

This is the Battery Display Indicator (BDI). It shows you the battery level and up to date driving information. For lead acid vehicle batteries the number of bars on the display shows the estimated battery level, not an exact calculation. Lithium battery vehicles do show the exact battery level.

The display alternates between different screens. The display button can be used to scroll through these manually:

- Ub The amount of volts drawn from the battery
- A Total number of amperes drawn from the battery
- UCL Controller software version
- Bat Battery percentage

The BDI also displays present errors. To know what these error codes mean, please refer to the troubleshoot section on page 27





Maximum load

Please do not exceed the indicated load capacity of the e-Tuk. Doing so may cause damage to the vehicle and could be dangerous to you, your fellow passengers and other road users. You can find max payload on the manufacturer's VIN plate in the vehicle, or in the license registration.

Please be aware that your e-Tuk's driving behavior and range change when driving with more passengers or higher loads.

e-Tuk Limo GT

Driver plus max 4 passsengers







e-Tuk Vendo GT

Driver plus max 600-800kg





Safety

Throttle



Please note the red emergency switch connected to the throttle (on the right hand side of the handlebars). Pressing the off button will disable the battery and motor. This will make the e-Tuk shut down immediately. Keep in mind that you will lose motor braking power and the vehicle can be stopped with the pedal brake only.

VIN Plate

The Vehicle Identification Number Plate can be found above the brake pedal. This plate contains the e-Tuk's serial number and other manufacturing information. The serial number is the number that is stamped into the plate. When contacting your service engineer, make sure you have the serial number ready.



Key switch



Your e-Tuk is equipped with a steering column lock. To engage the lock, turn the handlebars all the way to the right, then turn the key all the way to the left (counterclockwise). Now remove the key and the handlebars are locked into position.



It is a legal requirement that the driver and any passengers use the safety belts as provided on the e-Tuk. The e-Tuks seats and safety belts are not approved for the use of child seats.





Vehicle width

For new driver it is important to get familiar with the track and width of the vehicle. Remember that the drivers position is centered and you would need to keep both rear wheels on the road.

Emergency brake

In case of emergency situation thered emergency switch button will bring the vehicle to a direct stop and then disconnect high voltage motor circuit. Only use this in emergencies with caution to possible traffic behind the vehicle



Driving

Check vehicle's condition before driving. It is important to maintain full concentration on the road. Do not use a mobile phone or other distractions while driving.

Driving conditions



Temperatures



Weather conditions may affect the performance and range. High temperatures (35+ °C) combined with high payloads and hilly terrain may cause the motor and motor controller to get very hot. Drive calmly at a steady pace and give the motor and motor controller time to cool down.

For lithium battery vehicles cold weather reduces the range. Your vehicle will drive normally but keep in mind that you may not be able to drive so many kilometres on a single charge. It is recommended that you park your vehicle inside, preferably in a warm environment.



Driving on Slopes

Driving uphill drains more energy from the batteries and requires more power from the motor. Driving in hilly areas will reduce the vehicle's range. The maximum slope your vehicle can drive has an inclination of 20%.



When the vehicle is stationary on a hill, do not use the throttle to prevent the vehicle from rolling down the hill as this will cause the controller or battery to overheat. Instead always use the brake pedal or parking brake.

When driving from stand still on a hill, apply throttle and release the foot brake. Your vehicle may roll back slightly before taking off.



Driving Conditions

Ways to extend your range



eTuk Factory Takes You Further



Traffic Light

For battery vehicles the range can be extended by taking breaks in driving.
This allows the batteries to settle and recover some energy. A battery can release more energy when it is discharged slowly over a longer period.

By anticipating traffic you can make the ride more comfortable. If you release the throttle you will slow down using motor braking. You'll regain energy and your brakes will last longer.



Tires

Properly inflated tires reduce friction. The recommended tire pressure is 3bar / 40psi. Check your e-Tuk's tire pressure at least every month.



Speedometer

Lower your maximum speed and acceleration, the batteries will last longer if you take it easy on the throttle.



Weight

Properly inflated tires reduce friction. The recommended tire pressure is 3bar / 40psi. Check your e-Tuk's tire pressure at least every month.



Charging Plug

Properly inflated tires reduce friction. The recommended tire pressure is 3bar / 40psi. Check your e-Tuk's tire pressure at least every month.

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Battery Information Litium Battery



Battery Specifications

The eTuk lithium battery is a battery pack which contains 48 prismatic LFP lithium cell, arranged in a series of 24 with 2 cells parallel. The pack voltage is between 68-86V (0-100%). The battery pack is maintenance free and should not be opened.

Display Information

The lithium battery has a Battery Management System (BMS) which monitors and manages the battery safety. If any error occurs, the BMS sends service messages to the controller. These service messages will be displayed on the BDI. For common messages see BDI error messages on page 25 and 26. Battery maintenance should be done by trained and certified mechanics only.

Storage

A lithium battery will self-discharge over time, even when the vehicle is switched off. Make sure to charge a battery before long term storage.

- Store a battery at a charge of 40%.
- Recharge every month to prevent full self discharge.
- A fully charged lithium battery will self discharge within 6 months. 40% charged battery will self discharge in 2.5 months.
- An empty lithium battery will selfdischarge beyond repair within 2 weeks.

Charging

- Batteries should be charged after every use to ensure they are never stored in a discharged condition.
- If batteries are stored for extended periods of time they should be charged approximately every month
- Lithium batteries DO NOT have a memory effect (they do not need to be fully discharged prior to charging)



Charging Lithium Battery

Standard Charging Sequence

Turn Off Parking Brake



Plug in



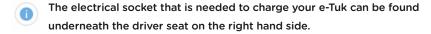
Switch off the vehicle! Turn the key to off position on key lock.



Apply the parking brake to make sure your vehicle does not roll away.



Charging cable plug in





The charger socket must be connected to 230V AC mains. Use a cable with a minimum cross section of 2.5 mm2

If you use an extension cord, make sure it's fully unwound. Rolled up cords can get very hot and can cause fire!

Time to Charge



Time To Charge

The lithium charger charges the battery at around 10-35 ampere. This means that 0-100% charging time is only 5 hours.



Charging your e-Tuk requires high current. Make sure each charging vehicle has its own power 'group' with appropriate fusing. Only connect ONE charger to a single 15A circuit or the circuit may become overloaded.

Lithuim charge indication

The vehicle will light up a red LED next to the charging socket when charger is connected, but not whether the charger is actually charging the battery. When the charging current is provided the charger will use a cooling fan. Be sure to switch the vehicle off BEFORE plugging in the charger. The charger stop charging when the battery is full. To see if the vehicle is charged you need to turn on the vehicle and read the BDI 'Bat' (battery percentage) value.





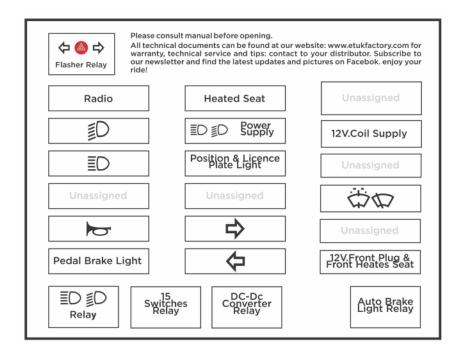
The Fuse Box

The e-Tuk contains several fuses.

All fuses for general vehicle electrics (like lights, horn, window wiper) are located in the fuse box underneath the driver's seat.

To reach the fuse box you will have to remove the driver's seat and the cover below it.

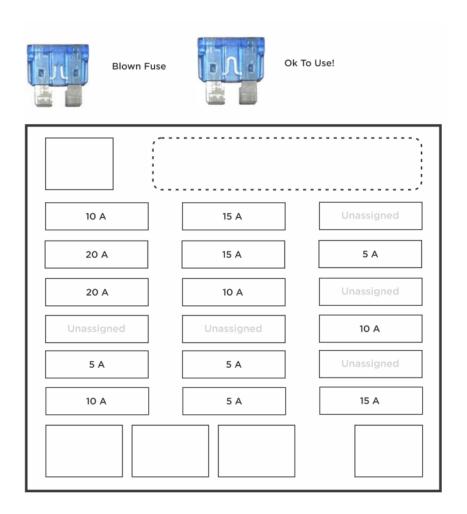
The illustration shows the location and function of the fuses.





When you're replacing fuses, only use blade fuses with amp rating according to the table below.

In order to check if a fuse is broken, carefully remove it from the fuse box. If the metal wire between the 2 poles is broken, the fuse is blown.







12V Battery

The 12V battery can be found underneath the driver's seat in front of the fuse box. When the vehicle is turned on, the minimum voltage, measured directly at the battery terminals, should be at least 13.1V. When the vehicle is turned off, the voltage should be at least 12V. If the battery voltage is less than 10V, the battery needs to be replaced and a service mechanic should check the DC/DC converter.



Tail Lights

The tail lights and rear direction indicator are highly durable LED lights. If they are not working, please make sure to check the connections and fuses first. If the light is indeed broken, you need to replace the entire unit.



Headlights

If one of your lights is not working, you will need to check fuses, bulbs, connectors and wiring. If a bulb needs to be replaced, remove the entire headlight assembly:

- Unscrew the two screws inside the dashboard that holds the headlight in place.
- Slide the black rubber protection cap back to reveal the white fitting
- Rotate the white fitting to remove it from the metal housing
- Press and turn the light bulb clockwise to remove the bulb from its fitting
- Install a new bulb, and install everything. Installation is reverse of the removal.





Use a BA20D 12V 35W bulb



Fluids

Oil

Your e-Tuk uses different types of oil for different parts of the vehicle.

Regularly check the ground underneath your vehicle for any traces of fluid that may have leaked. Report any leakage to your local service provider immediately.

Differential oil	Check the state of your differential oil every 3 years and replace if necessary.
	Use 750ml of 85W90 oil to fill the differential.
Brake fluid	Check the level of brake fluid every year. Unscrew the body panel that covers the brake pedal. This gives you easy access to the two reservoirs that hold the brake fluid. Check if the level of fluid is between the indicated levels on the reservoirs. Check for any visible leaks. Use DOT 3 or DOT 4 type fluid.
Front fork	Visually check for any leakage. Replace the oil in the front fork when you have spotted leakage or when damping becomes less. Also make sure you replace the fork seals. Use 15W type oil.

Fluids



Refilling the Washer Reservoir

Washer reservoir

Your windscreen washer can easily be filled with washer fluid. Best way to do it is to slide it down out of its holder. This way the opening cap is easy to reach and you won't spill a drop.



Rain Cover and Canopy

To keep your rain covers and canopy in good condition special maintenance is required:

Depending on use, apply silicone lubricant to the zippers to ensure consistent smooth operation

Whenever rain covers are being re-installed on the vehicle, make sure to use silicone lubricant for the rail and raincover seams to allow smooth installation.



Jacking





To prevent any damage, only place the jack at the allocated jacking positions.



Do NOT jack up the vehicle on the diagonal beam near the rear axle. This will damage the suspension.

Changing Tires

To change a rear tire, first jack up your vehicle. Remove the 4 nuts that hold the wheel in place. Remove the wheel. Make sure you put the new wheel in place and secure the bolts while the vehicle is still jacked up.

Fully tighten the wheel nuts when the jack has been removed and the parking brake is applied. Fastening torque of the rear wheel nuts is 100Nm To change the front tire, jack up the vehicle. Remove both brake caliper with their brackts and loosen the bolt of the front axle. Remove the front axle to release the front wheel. Pay attention to the right assembly order of the several spacers and other parts. Reassembly is the reverse order of removal.

Fastening torque of the front wheel nuts is 100Nm.

Fastening torque of the brake caliper bracket is 45Nm.

Towing



In case your vehicle needs to be towed, use the towing eye at the front of the vehicle. Turn the vehicle on, but engage the emergency switch (put it in the off position) and turn on the hazard lights button located left of the dashboard. Make sure your hazard lights remain on whilst being towed.



Handheld Programmer 1313

To facilitate vehicle troubleshooting, TukTuk Factory offers the 1313 handheld programmer. With this diagnostic device you can detect present and historical errors. Whenever an internet connection is available, remote assistance can be given by authorised distributors and service mechanics.



The handheld device can be plugged into the communication port which is located underneath the driver seat on the white box.

E-Tuk Factory recommends you to order a handheld whenever your business uses multiple vehicles, or when a dedicated service station is not readily available.

It's not working!



Check the charger. Whenever the charger is charging the e-Tuk will not drive.

ALWAYS disconnect the charger cable at the vehicle before switching on vehicle key switch.

Make sure the red emergency button on the handlebars is in the ON position.





^IDo a re-run of the starting sequence. Check if the direction switch is in N

(

Check the battery display for the battery level. Remember that this is only an estimated level of the battery's charge





It's still not working!

Dage Blig about an in work COLDING TOP BILLO SHIP SE ANSO-100 IBILA VIOLET ALE OF THE OFFICE OFFI GIROOF GIRIDO HIE ALEREN ONSI STEND TO TO TO THE TOWN OF THE O × × × 3 × × × GAINE TO DALLO SECRETOR TO SEC × × × × \$\\\ \frac{\x\tan\text{\text{\$\frac{\x\tan\text{\text{\$\frac{\x\text{\$\frac{\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\x\text{\$\frac{\frac{\frac{\x\text{\$\frac{\frac{\frac{\frac{\frac{\frac{\text{\$\frac{\fr GL 40 HB BARBER SARAN SA × × × × × × × × × × × H Polisian Har to to the line of the line × × × Delsoldio III 106 IV OF SERVICE CONTRACTOR OF SERVICE CONTRACTOR OF SERVICE CONTRACTOR OF SERVICE CONTRACTOR OF SERVICE × SO HIS STEEL COUNTED BRIDGES SON TORDALIOS AIRES TORIOS TOR × × × × U × 4 × Vehicle turns on but only drives about 2 meters Lights, horn, display, wiper, washer do not work Vehicle drives jolty at slow and fast speed Vehicle's rear axle makes a lot of noise Vehicle cannot reach maximum speed Vehicle turns on but does not drive itself Check the battery display for errors, write them down and communicate Display does not function by Motor stops while driving Vehicle does not turn on Battery does not charge Vehicle starts moving them to your service engineer. Most common errors are shown on page 25 and 26.



	Before Drive		After Drive			Charging	
Time	Voltage	Km	Time	Voltage	Km	Start Time	End Time



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BDI Error Messages

Error	What does it mean?	What has happened?	What do I do?	
22/ C hot	The controller is overheated. Driving speed is reduced.	Heat sink temperature reached +85°C.	Drive slowly and do not accelerate & decelerate abruptly. The controller will slowly cool down.	
23 / Io-bat	Battery power is getting low. Driving speed is reduced.	Battery power is getting low.	Get to a power socket and recharge soon.	
28	The motor is overheated. Driving speed is reduced.	The motor is overworked. This could have been caused by too much weight on the vehicle or going up too many steep slopes.	Allow the motor to cool down. Reduce the weight on the vehicle or take a less steep route.	
29	The motor is temperature sensor is not connected. The vehicle will not drive.	The motor temperature sensosr has detached.	Check the 2 pin connection nearby the motor.	
36	Motor encoder error The encoder has detached.		Check the 4 pin connection nearby the motor.	
37	Motor open	Motor phase is open	Check motor cables and connections.	



BDI Error Messages

Error	What does it mean?	What has happened?	What do I do?	
38	The main contactor is welded shut. Vehicle shuts down.	The main contactor does not open anymore.	Replace the main contactor.	
39	The main contactor is did not close Vehicle shuts down.	The main contactor did not close or connections are oxidised	Check the terminals on the contactor, fuse and batteries or replace the main contractor.	
41 / 42 43 / 44	There is an error in the throttle.	The throttle is broken or the wiring is faulty.	Check wiring on the throttle, or replace the throttle.	
47 / put 0	Vehicle will not drive while direction switch is in D or R.	The vehicle was switched on without putting the direction switch in neutral.	Put the direction switch in neutral (N).	
73 / StALL	Stall detected. The motor is stalled and the vehicle will not drive.	Something is blocking the motor and preventing it from turning.	Check if something is blocking the motor, wheels or drive-train. Check the 4 pin connection on the motor. The driving angle might be too steep.	
24 / HIREG Overvoltage on the controller. Precaution warning, too high voltages could shorten lifetime of equipment		During drives with regenerative braking, a fully charged (new) battery can cause high voltage peaks	After a full charge, try using more mechanical brake during driving, especially when rolling downhill	



