



ENVO

# D35 | ST EBIKE

## USER MANUAL

+1 (604) 423-3381 ENVODRIVE.COM

# TABLE OF CONTENTS


**1. INTRODUCTION 3**

1.1. Use of Manual 3
1.2. Service & Technical Support 3
1.3. Illustrations 3

**2. SAFETY & GENERAL TIPS 4**

2.1. Street Legality 4
2.2. Rules of the Road 5
2.3. Before your First Ride 6
2.4. Battery & Charger Safety 7
2.5. First Charge 8
2.6. Battery Removal & Installation 9
2.7. Charging your Battery 10
2.8. Battery Transport 11
2.9. Battery Disposal 11
2.10. Local Regulations 11
2.11. General Riding Tips 12
2.12. Bike Fit 14
2.13. Safe Operating Conditions 15

**3. PRODUCT DESCRIPTION 16**

3.1. ENVO D35 Components 16
3.2. ENVO D35 Specifications 17
3.3. ENVO ST Components 18
3.4. ENVO ST Specifications 19
3.5. Product Features 19

**4. ASSEMBLY INSTRUCTIONS 21**

4.1. General Requirements 21
4.2. Unboxing 21
4.3. Unpacking 21
4.4. Tools Required 21
4.5. Assembly & Installation 22
4.6. Torque Chart 27
4.7. Assembly Checklist 27

**5. OPERATING YOUR PRODUCT 28**

5.1. Operation 28
5.2. Activating System Lights 29
5.3. LCD Meter Programming & Use 30
5.4. Hand Throttle Control 33
5.5. Brakes 33
5.6. Operating Range 35
5.7. Maximize your Range 35
5.8. Preride Checklist 36

**6. ACCESSORIES 37**

6.1. Panniers 37
6.2. Bike Rack Adapators 37

**7. MAINTENANCE & REPAIR 28**

7.1. Maintaining Parts 38
7.2. In Case of Accident 39
7.3. Troubleshooting Table 41
7.4. Recommended Service Intervals 44
7.5. Changing Disc Pads 45
7.6. Changing Brake Fluid 45

**8. TRANSPORTATION & STORAGE 47**

8.1. Transportation 47
8.2. Storage 47

**9. GENERAL TERMS & WARRANTY 47**

9.1. Warranty 47
9.2. Registering Product Warranty 49
9.3. Exclusions 49
9.4. Satisfaction Guarantee 49
9.5. Customer Service 49
9.6. Troubleshooting & Technical 49

**10. CONTACT 51**

Read, understand, and follow all of the instructions and safety precautions in this manual and on all product labels. Failure to follow the safety precautions could result in serious injury or death.

# 1. INTRODUCTION

## WELCOME TO THE ENVO FAMILY

Thank you for choosing an ENVO Electric Bike. As a leader in electric bike design and distribution in Canada, we are passionate about our customers riding their bikes more and driving their cars less. We are focused on ensuring that you have a safe and enjoyable riding experience for years to come. At ENVO, we are committed to developing sustainable zero emission mobility systems and work hard to maintain the satisfaction of our customers. Please stay connected and share anything that can help us improve our products and service.

## 1.1. USE OF MANUAL

For safe and enjoyable operation and installation of all ENVO Drive Systems products please carefully read and follow the recommendations outlined in this manual. It is critical that you clearly understand all general operations of various parts of your ebike.

**Please pay extra attention to any information marked with a caution or warning symbol:**

**⚠CAUTION**

## 1.2. SERVICE & TECHNICAL SUPPORT

Please contact us regarding any technical issues that you encounter, we are here to help. Give us a call, visit our help centre at **support.envodrive.com**, or refer to the tutorial videos on our website. This manual is not intended to be an extensive service guide. If you are in need of in-depth immediate service contact your local bike shop.

## 1.3. ILLUSTRATIONS

The illustrations in this manual may not be perfect representations of your ebike, and some of the components may differ. The models illustrated are for instructional purposes only.

# 2. SAFETY & GENERAL TIPS

## 2.1. STREET LEGALITY

- Electric bikes or conversion kits considered street legal under Canadian and US Federal Electric Bike Regulations are viewed as bicycles, not motorized vehicles and do not require an insurance license plate or driver's license. It is important to check your province/state, county, and local laws to ensure that your ebike complies with local regulation provisions
- ENVO ebikes general settings comply with 32km/h (20mph) max assisted speed, 500W max mechanical power, equipped with brake cut-off switches and options to control assist power while riding. These provisions suffice all Canadian federal and provincial regulations. Parks and other privately managed properties might have different rules. ENVO ebikes are considered ebike Class II in the US
- Please note street legal does not mean cyclists can ride an electric bike or trike on bicycle pathways and trails that restrict the use of electric assist bikes
- There may be components such as throttle that have a different legal definition depending on the province/state you are located in. Because of this we have provided controller settings that can adapt to a variety of specifications
- By modifying an electric bike or conversion kit's settings, upgrading a component's capacity, such as the controller or motor, the product may lose its street legality even if modifications are done by a professional. If at any point ENVO Drive Systems is asked to implement upgrades, we will notify you if the modifications exceed street legal limits
- ENVO is not liable for the legality of use of products in various locations

**⚠CAUTION**

**Your insurance policy may not provide coverage for accidents related to the use of an ebike. Make sure to contact your insurance company to know about your coverage.**

## 2.2. RULES OF THE ROAD

**Failure to follow recommendations outlined in this section may cause damage to property, injury, or even death.**

- Always obey all the traffic rules, regulations, signs, and signals
- Always wear a bicycle helmet that meets or exceeds safety standards
- Ride in a single file on the right side of the road
- Avoid drain grates, soft road edges, gravel, sand, potholes, and uneven paving
- When crossing the railroad track, pay extra attention as you may lose control
- Avoid unsafe actions when riding the ebike
- Do not carry a payload that shifts your balance, hinder your vision, or affect your hearing
- Always have both of your hands on the handlebar
- Do not tow or push the product
- Replace broken parts immediately
- If any ebike component is not functioning properly, end the ride immediately

## 2.3. BEFORE YOUR FIRST RIDE

- If you have an impairment or disability such as visual impairment, hearing impairment, physical impairment, cognitive impairment, and/or a seizure disorder, consult your physician before riding any ENVO Drive Systems product
- Before going on your first ebike adventure, take time to get familiar with your ebike
- Make sure everything on the bike is secured and tight, the battery is locked, and there is no play in any screws or bearings
- Check if you are able to turn the handlebar while the wheel is held in place **Figure 2A**
- Check if the handle bar is secured to the stem by trying to twist the bars forward and backward **Figure 2B**
- Ride around a quiet area at the lowest PAS (Pedal Assist LCD) setting, get familiar with your brakes and settings
- Be sure to bed in the brakes (See Brakes, Section 5.5.). Failure to do so will result in lower than optimum braking performance and can lead to squealing

Figure 2A

Figure 2B

## 2.4. BATTERY & CHARGER SAFETY

- Please keep the battery away from excessive heat and moisture, do not spray with high pressure water, and do not store outdoors in freezing temperatures below 0°C
- Always store your battery in a well ventilated, cool, dry room at room temperature
- Keep away from children and pets
- If you notice any SMOKING OR SPARKING while charging immediately disconnect the battery
- Disconnect the battery from the charger once the charger light is green. And disconnect the charger from the wall plug
- Always fully charge the battery before storage and continue to check up on and charge every 2 months. Failure to do so can result in a loss of capacity to the battery and may even permanently damage the battery cells, which will void the warranty
- Always unplug the charger when not in use
- Take care of the pins. Always be gentle when pulling the charging pin out. Rough use of the pins can cause irreversible damage to the pins and battery
- Always use the charger provided by ENVO for the ENVO battery
- Make sure you always seal the USB port when not in use
- Port is only designed for charging low voltage electronics. The output of the USB port is 5V, 1A
- Always unplug the charger when not in use
- To minimize chances of sparking, first gently plug the charger into the battery and then plug the charger into the wall
- The charger may get hot while charging. Make sure charger's surrounding is open for natural heat dissipation

**NEVER disassemble the battery, there is significant risk of shock and damage to the battery. Doing so will also void the warranty. DO NOT puncture or crush the battery, or expose to server vibrations and impacts.**

Do not puncture or crush the battery. Do not expose the battery to severe vibrations or impacts. Failure to properly use, charge, and store your battery as instructed will void the warranty and could cause a hazardous situation.

## ⚠CAUTION

Do not use the ENVO battery charger for any purpose other than charging your ebike. Do not use the ENVO battery as a power source for any other devices than your ENVO ebike. If you do so the warranty will not be applicable, and ENVO Drive Systems will not be liable for any damage to the system or injury to the persons.

## 2.5. FIRST CHARGE

- When you first receive your battery it will have about 50-70% of charge
- Before your first ride, charge your battery up to 7-9hrs, but no longer than that
- This may require you to leave the battery in charge even when the charger light is green. Doing so ensures that each cell is charged to its full capacity
- The full voltage of the battery pack should be slightly under 42V, and can be checked in the LCD display

Do not drop the battery. Damaged batteries can cause fire and may explode which can lead to damaged property, injury or even death.

## 2.6. BATTERY REMOVAL & INSTALLATION

Figure 2C

Figure 2D


Figure 2E


Figure 2F


### BATTERY REMOVAL

- Turn the key counterclockwiseto unlock the battery gently
- The lock is located on the left side of the bike **Figure 2C**
- Hold the battery and push with your thumb while pulling with your fingers. The battery should easily come off **Figure 2D**

### BATTERY INSTALLATION

- To reinstall, first gently turn the key into the lock position
- Then line the pins at the back of the battery with the slots and make sure the battery is aligned **Figure 2E**
- Give a gentle push towards the back, then firmly press the front of the battery down. If done correctly, you should hear a click locking battery into the place
- Make sure the battery is firmly locked before operating the ebike **Figure 2F**

## 2.7. CHARGING YOUR BATTERY

- Never store the battery in a discharged state. After every ride, charge the battery as soon as it has reached room temperature. This is to ensure battery health
- When it comes to charging the battery, there are two options you can either charge the battery while it is on the bike, or you may take it with you and charge it in your home or office
- For safety, always turn off your battery before charging
- Your bike comes with an on-board charging system that can charge the battery while it is still on the bike. The pull-out ZIP CORD can access this system on the left side of the controller
- If you choose to take the battery with you to charge, there is a charging port near the battery's bottom
- Always charge the battery in a well ventilated, cool room. Do not leave the battery unattended for an extended period
- You can check the charge of the battery by pressing and holding the power button
- If all the lights are green, you can be assured that the battery is charged above 75% (this function is only activated when the battery is switched on)
- Charging time is 5-6 hrs or until the charger light is green

**IMPORTANT NOTE:**

As your battery ages, it will gradually lose capacity. With proper care and maintenance, your lithium ion battery will retain up to 70% of its capacity for about 500 full discharge/recharge cycles. As capacity diminishes, you will notice a gradual drop off in max range capability. When range falls to an unacceptable level, contact your local ENVO dealer to purchase a new battery.

**⚠CAUTION**

**Please make sure you are gentle anytime you are inserting or removing the port's charging cable. Failure to do so can result in damaged pins and poor connections.**

## 2.8. BATTERY TRANSPORT

- Lithium-ion batteries are subject to many regulations and are often considered dangerous or hazardous materials by carriers. Be sure to check for relevant laws and ask the carrier for approval prior to shipping a Lithium-ion battery or transporting it by air

## 2.9. BATTERY DISPOSAL

- Be a friend to the environment. Recycle your old batteries at a local battery recycle centre
- Batteries should never be thrown in the garbage
- Contact ENVO for more information about how to recycle your batteries

**Disposing of Lithium-Ion batteries incorrectly can allow moisture and oxygen to enter the battery. This can lead to the oxidation of lithium components and which can cause a heat reaction that may include fire or explosion. In addition overcharging, overheating, shock from dropping, or crushing can lead to a heat reaction. Batteries must always be recycled. They should not be thrown in the garbage.**

## 2.10. LOCAL REGULATIONS

Generally, the regulations for ebikes throughout North America follow the same guidelines; however, there may be local differences such as where you can ride, minimum rider age, or required equipment and registration. Please follow the specific regulations for the use of an electric bicycle in your local municipality. It is the rider's responsibility to know the local regulations that apply to an electric bicycle and to obey them.

## 2.11. GENERAL RIDING TIPS

Read, understand, and follow all of the instructions and safety precautions in this manual.

Electric Bikes can be dangerous to use. The user or consumer assumes all risk of personal injuries, damage, or failure of the bicycle or system and all other losses or damages to themselves and others and to any property, arising out of or as a result of using the bicycle.

As with all mechanical components, your bicycle is subjected to wear and high stresses. Different materials and components may react to wear or stress fatigue in different ways. If the design life of a component has been exceeded, it may suddenly fail, possibly causing injuries to the rider. Any form of crack, scratches or change of coloring in highly stressed areas indicate the life of the component has been reached and should be replaced.

The pedal assist is activated as soon as you spin the pedals or stimulate the throttle, make sure you are firmly seated on the bike and have at least one brake engaged prior to engaging the motor. Failure to do so may result in injury or even death.

Electric bikes, like any other vehicle, require regular maintenance by mechanically inclined persons to guarantee safety of use. Screws and nuts are subject to become loose due to road vibration, especially within the first few kilometers of use. Make sure you inspect your bike often and have it serviced by a professional regularly.

Failure to wear a helmet and other recomended safety gear when riding an ebike can lead to serious injury or death.

- Always ride at a speed that's appropriate for the conditions. Higher speed means higher risk
- Ensure brakes and motor cut off switch are working prior to every ride
- Ensure nothing is loose (ie bolts, battery, wheels, pedals, and handlebar) and everything is secured on the bike prior to every ride
- Always keep both hands on the handlebars and both feet on the pedals
- Do not operate if you are sleepy, sedated or while under the influence of drugs and/or alcohol
- If motor speed is noticeably dropping while climbing a hill, assist the motor by pedaling
- Do not pedal around a corner as you may gain to much speed and lose control
- Always keep the brakes covered, and be prepared to stop in case of emergency
- Apply both brakes simultaneously and smoothly
- Make sure you clearly understand that it is very difficult for any vehicle to notice your presence, ALWAYS assume that you cannot be seen and dress in bright colours, reflective gear and use bright lights
- Ebikes are silent and move faster than people and traffic expect them to. Ensure those around you are aware you are approaching by ringing your bell and verbally address pedestrians when passing by, or when riding in areas where wildlife are located
- Wet weather impairs traction, braking and visibility, both for the cyclist and for other vehicles sharing the road. The risk of an accident is dramatically increased in wet conditions
- Reflectors are not a substitute for required lights. Riding at dawn, at dusk, at night or at other times of poor visibility without adequate bicycle lighting systems and without reflectors is dangerous and may result in serious injury
- Ensure your wheels are TRUED before each ride. Spin each wheel and check for brake clearance and side to side wobble. If a wheel wobbles side to side even slightly or rubs against or hits the brake pads, take the bike to a qualified bike shop to have the wheel trued
- Never ride with headphones. They mask traffic sounds and emergency vehicles sirens, distract you from concentrating on what is going on around you. Headphone wires can tangle in the moving parts of the bicycle, causing you to lose control
- Wear proper attire, including bright clothing, protective glasses, and sturdy shoes. Never wear a loose-fitting dress or long dress when riding as it can get caught in the moving parts of the bike and cause serious injury or even death
- Always wear an approved helmet and ensure it fits according to the manufacturers' instructions. Ensure your helmet meets the latest certification standards and is appropriate for the type of riding you do and if there are any special requirements for riding an electric bike

- At temperatures below -10°C the motor grease might be too stiff for sudden throttle, high speed and high-power rides. Give the motor some low speed and low power spins and warm up the gears before going full power
- Avoid changing gears very rapidly from first gear to the last gear, or vice versa. If you change multiple gears too quickly, the chain may come off the front sprocket
- Never pedal backwards while shifting, this could jam the chain and cause serious damage
- Never shift gears under heavy loads, this may break the chain. You must only apply just enough force so that the gear can shift
- ENVO Bikes are equipped with an sleep mode which ensures that your bicycle does not drain the battery if left idle. The sleep mode triggers after 5+ hours of inactivity, it is suggested that you always turn off your ebike when leaving it idle for a long time and always keep the keys with you. If the battery goes off due to sleep mode, you can take the battery out and manually turn off/on the battery using the switch.

## 2.12. BIKE FIT

- It is important to ensure your ebike is a suitable size for you. Not only for your safety but also for your comfort. Incorrect sizing, seat height, and reach can lead to various ailments, such as knee pain, back pain, and groin pain. We recommend seeking professional help when choosing and setting up the right bike for yourself
- This is a general sizing chart that you can use to know what sizes are suitable for you

### 2.12.1. ENVO D35

- Standover Height is the basic element of bike fit; it is the distance from the ground to the top of the bicycle frame, or the level your pelvic area reaches when straddling the bike
- Your bike should have a minimum standover height clearance of two inches (5cm)
- To check for correct standover height, straddle the bike while wearing the shoes you plan to wear while riding, and bounce vigorously on your heels. If your pelvic area touches the frame, the bike is too big for you and is therefore unsafe to ride

### 2.12.2. ENVO ST

- Standover Height does not apply. Instead, the limiting dimension is determined by the saddle height range. You must be able to adjust your saddle without exceeding the limits set by the height of the top of the seat tube and the “Minimum Insertion” or “Maximum Extension” mark on the seat post (if it is not demarcated, to be safe you should allow for at least 4 inches of clearance below the seat clamp)

## 2.13. SAFE OPERATING CONDITIONS

### 2.13.1. CARRYING CARGO

- Always ensure that any luggage or child seat is securely attached to the bike and there are no loose cables. Carrying a load requires getting accustomed to. Practice maneuvering and braking on a flat, hazard and traffic free street with and without a load before going out into the road. Carrying a seated passenger or heavy load involves risks, foremost of which can be decreased braking power and increased stopping distance. The maximum weight capacity is 130kg shared between the rider and cargo

### 2.13.2. WEIGHT CAPACITY

- ENVO D35 and ENVO ST eBikes are designed with a maximum weight capacity of 130kg. The rear rack maximum weight capacity of a is 20kg. Exceeding the maximum weight capacity can result in damage to the bike, which can lead to serious injury or death

### 2.13.3. UNSAFE USE

- This bike is not designed for any purpose other than commuting and cruising in a relaxed, safe manner. Do not use this bike to jump over curbs, or ride on technical mountain/off-road trails
- Never exceed 20mph or 32km/h

# 3. PRODUCT DESCRIPTION

## 3.1 ENVO D35 COMPONENTS


| | | | |
|---|---|---|---|
| 1 | Display Unit | 16 | Disk Brake Caliper |
| 2 | Keypad | 17 | Front Fender Brace |
| 3 | Handlebars | 18 | Front Fender |
| 4 | Brakes | 19 | Controller |
| 5 | Handlebar Adjustment Bolt | 20 | Battery |
| 6 | Headset | 21 | Pedal |
| 7 | Top Cap | 22 | Crank Arm |
| 8 | Brake cables, shifter cables and electric wires | 23 | Chain |
| 9 | Headlight | 24 | Derailleur |
| 10 | Front Fork | 25 | Rear Wheel |
| 11 | Front Tire | 26 | Rear Fender |
| 12 | Wheel Rim | 27 | Taillight |
| 13 | Spokes | 28 | Rear Rack |
| 14 | Air Valve Stem | 29 | Seat Stem |
| 15 | Quick Release Lever | 30 | Saddle |

## 3.2. ENVO D35 SPECIFICATIONS

**Model:** ENVO D35

**Frame:** 27.5"×1.95", Hydroformed Alloy 6061 TIG welded

**Fork:** Zoom 595S AMS/SR Suntour, 27.5"×1.95" Suspension fork, with load adjustment and lock, Travel 80mm

**Headsets:** threadless headsets, φ25.4×44×30mm, 22mm, NECO

**Handlebars:** alloy, 31.8mm TP 22.2mm×680mm, 45mm,15 degree, alloy threadless stem

**Brake Set:** F/R alloy hydraulic disc brakes, black, with alloy electric brake lever , Rotor 180, Zoom HB 875-E/Tektro HD-E350

**Grip:** TPR Grip VELO Crank

**Set:** 3/32"×48T×170mm×9/16", alloy crank with single chain ring cover, PROWHEEL PRO-748P BB sets: sealed B.B sets, B908

**Pedal:** Alloy, 9/16" WELLGO

**Chain:** TEC,C70 F/R Hub: F: alloy hub with quick release, hub motor

**Gear Set:** SRAM X4/SHIMANO ALTUS 8 speeds,

**Rim:** 27.5"x13Gx36H, alloy double wall, black spokes stainless steel black 13G spokes

**Tire:** 27.5"×1.95", black, with AV butyle tube, CSR/ Chaoyang/Kenda

**Saddle:** vinyl top cover, padded with PU, with black ABS, VELO

**Front Light:** battery light, AXENDO 60

**Rear Light:** battery light RL13

**Rear Carrier:** alloy carrier, black

**Fender:** PVC Plastic fender

**Motor:** Brushless 36V/500W max/geared rear motor

**Battery:** 36V/12.8AH 3200 LG/Panasonic Lithium battery

**Charger:** 42V 2A CC-CV 240/120V ULc

**Controller:** BLDC Sine-wave controller 17A waterproof connectors

**Sensor:** PAS/thumb throttle, speed sensor

**Display:** LCD panel, with 5 assistance levels, power display, 750C

**Packing:** Assembled, requires front wheel QR assembling, handle bar and final tunes

**Seat Post:** alloy suspension seat post

**Kickstand:** alloy single rear kickstand

## 3.3. ENVO ST COMPONENTS


| | | | |
|---|---|---|---|
| 1 | Display Unit | 16 | Disk Brake Caliper |
| 2 | Keypad | 17 | Front Fender Brace |
| 3 | Handlebars | 18 | Front Fender |
| 4 | Brakes | 19 | Controller |
| 5 | Handlebar Adjustment Bolt | 20 | Battery |
| 6 | Headset | 21 | Pedal |
| 7 | Top Cap | 22 | Crank Arm |
| 8 | Brake cables, shifter cables and electric wires | 23 | Chain |
| 9 | Headlight | 24 | Derailleur |
| 10 | Front Fork | 25 | Rear Wheel |
| 11 | Front Tire | 26 | Rear Fender |
| 12 | Wheel Rim | 27 | Taillight |
| 13 | Spokes | 28 | Rear Rack |
| 14 | Air Valve Stem | 29 | Seat Stem |
| 15 | Quick Release Lever | 30 | Saddle |

## 3.4. ENVO ST SPECIFICATIONS

**Model:** ENVO ST

**Frame:** 27.5"×1.95", Hydroformed Alloy 6061 TIG welded

**Fork:** Zoom 595S AMS/SR Suntour, 27.5"×1.95" Suspension fork, with load adjustment and lock, Travel 80mm

**Headsets:** threadless headsets, φ25.4×44×30mm, 22mm, NECO

**Handlebars:** alloy handlebar, 31.8mm TP22.2x680mm, 65mm, 30 degree

**Stem:** alloy thread-less stem, φ25.4* E110mm, adustable, sand black, MA-579, PROMAX

**Brake Set:** F/R alloy hydraulic disc brakes, black, with alloy electric brake lever, Rotor 180,

**Grip:** TPR Grip VELO Crank

**Set:** 3/32"×48T×170mm×9/16", alloy crank with single chain ring cover, PROWHEEL PRO-748P

**Pedal:** Alloy, 9/16" WELLGO

**Chain:** TEC,C70 F/R Hub: F: alloy hub with quick release, hub motor

**Gear Set:** SRAM X4/SHIMANO ALTUS 8 speeds,

**Rim:** 27.5"x13Gx36H, alloy double wall, black spokes stainless steel black 13G spokes

**Seat Post:** alloy suspension seat post

**Tire:** 27.5"×1.95", black, with AV butyle tube, CSR/ Chaoyang/Kenda

**Saddle:** vinyl top cover, padded with PU, with black ABS, VELO

**Front Light:** battery light, AXENDO 60

**Rear Light:** battery light RL13

**Rear Carrier:** alloy carrier, black

**Fender:** PVC Plastic fender

**Motor:** Brushless 36V/500W max/geared rear motor

**Battery:** 36V/12.8AH 3200 LG/Panasonic Lithium battery

**Charger:** 42V 2A CC-CV 240/120V ULc

**Controller:** BLDC Sine-wave controller 17A waterproof connectors

**Sensor:** PAS/thumb throttle, speed sensor

**Display:** LCD panel, with 5 assistance levels, power display, 750C

**Packing:** Assembled, requires front wheel QR assembling, handle bar and final tunes

**Seat Post:** alloy suspension seat post

**Kickstand:** alloy single rear kickstand

**BB sets:** sealed BB sets, B908

## 3.5.PRODUCT FEATURES

### 3.5.1. ENVO D35

- The ENVO D35 is the second generation of ENVO ebikes engineered by ENVO Drive Systems. It offers 500W maximum legal power and up to 100Km range. To achieve this feat, ENVO does not compromise on weight, looks, or ergonomics. ENVO maintains the “bicycle” characteristics with an added extra boost

### 3.5.2. ENVO D35 & ENVO ST

- ENVO bikes are equipped with a high torque, geared hub motor. The motor sits in the middle of the rear wheel. The motor’s axle is held fixed in the rear drop out, and internal electronics spin its shell. The hub’s rotation is independent of any bicycle drivetrain train components, including the cranks, derailleur, or cassette
- ENVO bikes have front forks, which utilize a secondary wheel retention device to reduce the risk of the wheel disengaging from the fork if the wheel is incorrectly secured

| |
|---|
| **Secondary retention devices are not a substitute for correctly securing your front wheel. Failure to properly secure the wheel can cause the wheel to wobble or disengage, which could cause you to lose control and fall, resulting in serious injury or death.** |

# 4. ASSEMBLY INSTRUCTIONS

## 4.1. GENERAL REQUIREMENTS

Products listed in your order need to be installed professionally, as they require fine-tuning and adjustment after installation. It is highly recommended to get help from an experienced mechanic, refer to your local dealers, or book an appointment with us for an Installation session. If you choose to do it yourself, with your own responsibility, please make sure you refer to our available online guides as this is a safety concern.

**⚠CAUTION**

**Some Bicycle accessories may present a choking hazard and other hazards to small children. Keep any bike parts accessories, tools away from small children.**

## 4.2. UNBOXING

- Open the box from the top side
- Please be careful when pulling the frame out, it is the heaviest part of the bike, and the handlebar is attached. You must be careful to protect the cables from getting tangled
- Two people are recommended for the unboxing procedure

## 4.3.UNPACKING

- Cut all the zip ties and separate the wheel
- Do not damage the battery as it is mounted on the bike frame
- Remove all packaging wrap

**⚠CAUTION**

**While cutting zip ties be careful not to scratch or damage your bike, be extra cautious while cutting zip ties around wire connections and cable housings. Do not damage the battery when removing it the frame from the box.**

## 4.4. TOOLS REQUIRED

- Allen key set (4mm, 5mm, 6mm), Wrench (8mm, 15mm, Grease

# 4.5. ASSEMBLY & INSTALLATION

Figure 4A

Figure 4B

Figure 4C

Figure 4D

## 4.5.1. FRONT WHEEL MOUNTING

- Remove the stud provided between the fork **Figure 4A**
- Remove the pad spacer provided in the brake caliper **Figure 4B**
- Mount the front wheel in the direction where the disk brake lines up with the caliper
- Insert the quick release making sure there is a spring on either side of the fork drop out. The narrow side of the spring should face towards the wheel **Figure 4C**
- Tighten the quick release and lock it **Figure 4D**

**Improper assembly of the bike may result in serious injury or even death. Make sure you seek the help of a qualified mechanic in case of any doubt.**

Figure 4E

Figure 4F

Figure 4G

Figure 4H

### 4.5.2. ENVO D35 HANDLEBAR ASSEMBLY

- Remove the four Allen bolts and remove the clamp **Figure 4E**
- Place the handlebar in the center of the clamp, such that the gear shifter is on the right side **Figure 4F**
- Reinstall the clamp and proceed to tighten the 4 screws. To make sure that torque is applied evenly, tighten one bolt, skip the next and tighten the third bolt on the opposite side. Then proceed to righten the remaining bolts
- Before securing the handlebar, adjust the angle to your desired position **Figure 4G**
- Make sure there is an equal gap between the clamp and the stem between all four bolts
- Torque the 4 bolts to 5Nm
- Adjust the handlebar height by loosening and or tightening the Allen bolt in the center of the stem. The recommended Torque is 12Nm **Figure 4H**
- Never adjust the handlebar height above the recommended mark or high enough to allow 4 inches of the stem to be left inside the headset tube
- Always check the stem is tight and cannot move
- Make sure the grips are tight enough that they do not move

Figure 4I

Figure 4J

Figure 4K

### 4.5.3. ENVO ST HANDLEBAR ASSEMBLY

- Remove the two Allen bolts on the handlebar to loosen it up **Figure 4I**
- Place the handlebar onto the headset and tighten the bolts
- Adjust the handlebar height by loosening and or tightening the clamp **Figure 4J**
- You can also adjust the angle of the handlebar when the clamp is loosened **Figure 4K**

Figure 4L

Figure 4M

Figure 4N

Figure 4O

### 4.5.4. LAMP AND FRONT FENDER MOUNTING

- Remove the Allen bolt **Figure 4L**
- Place the fender with the lamp behind the fork bridge, and screw them into place **Figure 4M, Figure 4N**
- Take out the clamps that are provided in the small box
- Put the clamp on the fork and fender, align the holes and pass the bolt through
- Put the nut with the washer on the bolt and tighten. You may need a size 8mm wrench to hold the nut for tightening **Figure 4O**
- Repeat steps for the other side

### 4.5.5. FENDER & RACK MOUNTING

- The rack and rear fender comes preassembled
- It is a good practice to check if all the fasteners are tightened

Figure 4P

Figure 4Q

Figure 4R

Figure 4S

### 4.5.6. PEDAL INSTALLATION

- Take the pedals out of the box
- Apply a small amount of grease to the screw portion of the pedal
- Look for the letters displayed on the head of the screw “L” indicates left, and “R” indicates right **Figure 4P**
- Tighten the pedals using a size 15mm wrench
- Tighten the right pedal in a clockwise motion **Figure 4Q**
- Tighten the left pedal in an anti-clockwise motion

### 4.5.7. SADDLE INSTALLATION

- Apply some grease to the seat tube
- Insert the seat post into the tube **Figure 4R**
- Adjust to preferred height
- Tighten the seat clamp

### 4.5.8. BATTERY

- Initially, the battery is sent to you in the off position
- Insert the key, unlock the battery and remove (see battery removal and installation section 2.6)
- On the underside of the battery, just below the handle, there is a small toggle switch provided that indicates “I” or “O”
- “I” indicates ON
- “O” indicates OFF
- Press the switch to the ON position and place the battery back and lock it **Figure 4P**

## 4.6. TORQUE CHART

| COMPONENT | TORQUE |
|---|---|
| Front wheel Axle | Quick Release closed cam system |
| Rear Hub cone locking nut | |
| Pedal | 30 Nm |
| Kickstand | 15 Nm |
| Clamps for fender | 15 Nm |
| Stem bolt | 12 Nm |
| Handlebar bolts | 5 Nm |
| Crank bolt | |

**Fasteners must be tightened correctly. Fasteners are not secured if the torque is too little, and the fasteners can deform, stretch, or break if the torque is too much. Incorrect torque can lead to component failure resulting in serious injury or even death.**

## 4.7. ASSEMBLY CHECKLIST

It is important to complete the following checklist before your first ride to ensure that bike is assembled correctly:

- Handlebar aligned correctly
- Pedals are correctly installed
- The seat post is installed and its height adjusted
- Front-wheel installed and aligning with handlebar correctly
- The front and Rear brakes working
- Tires are inflated and up to correct pressure
- Lights and Reflectors connected

# 5. OPERATING YOUR PRODUCT

## 5.1. OPERATION

- Your ENVO Electric Bike LCD meter monitors pedal assist, speed, odometer, trip distance, riding time, and battery energy level. To turn the meter on, press and hold the Power button for 1 second. Make sure the battery is fully inserted into the ENVO Electric Bike, and the on/off switch is “ON”
- ENVO batteries are equipped with a five-minute sleep function. If no activity is detected, the bike will go into “static” mode to conserve battery power. Simply cycle the bike off then on again to reactivate the battery
- With the display ON, you are ready to select your Pedal Assist mode by using the UP/DOWN button situated on the controls on the handlebar’s left hand side. Note that the throttle will be active and power the motor if the assist level is 1 or higher
- ENVO bikes are equipped with a Pedal Assist Sensor installed on the bottom bracket and senses pedal crank rotation electronically
- Using the UP and DOWN arrows, you can set Pedal Assist from ZERO through 5-speed modes. One (1) is the lowest, and (5) is the higher boost
- With non-zero Pedal Assist mode, the motor will now turn on when you begin pedaling, and you will not need to use the throttle. However, you have the ability to increase your speed with the throttle application while using Pedal Assist mode. Full throttle will be comparable to using the system on level 5 of assist; hence the throttle will not have any noticeable effect on level 5
- Please note that it takes about a quarter of pedal rotation before Pedal Assist kicks in and turns on the motor
- To enter walking mode, press and hold the DOWN button for 2 seconds. The ebike will start moving at a walking speed until you exit the mode by releasing the button

**⚠CAUTION**

**The acceleration provided by the electric motor may feel very uncomfortable at first. It is best to start in PAS mode 1 and move up to the faster modes as you become more comfortable with the acceleration. If you start in the higher modes 3, 4, or 5, the motor kick might cause panic. In 0 mode, the pedal assist and the throttle are NOT active.**

## ⚠CAUTION

Never sit on your ebike when it is resting on its kickstand. This may cause the ebike to tip over.

## ⚠CAUTION

Please make sure you keep the LCD Display in a safe place (in a closed environment) and away from children. The display has a small battery inside, which has to be charged fully. If by accident someone applies throttle, the motor may get activated. ENVO drives will not be liable for any consequences.

Make sure you are seated on the bike and have both of your hands on the handle before turning on throttle control. Failure to do so may result in loss of control and may cause serious injury or even death.

## 5.2. ACTIVATING SYSTEM LIGHTS

- To turn the head and LCD lights ON and OFF, simply press and hold the UP arrow on the LCD display for about two seconds until you see the display light up

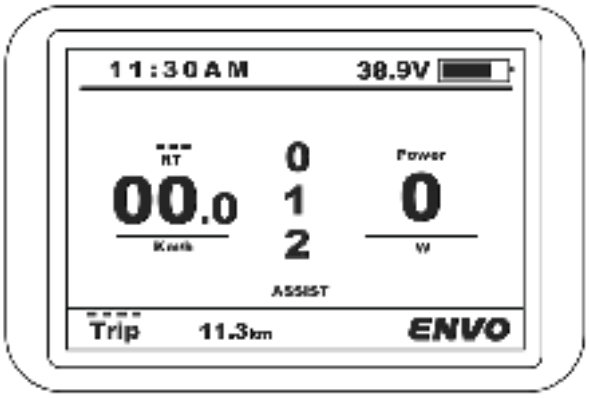
## 5.3. LCD METER PROGRAMMING AND USE

Your LCD Display comes pre-programmed with the ideal settings. If you accidentally change something, or something is not working correctly, or you would like to change something. The default settings are stated below.

If you have any questions about the parameter settings, please give us a call or visit our help centre at **support.envodrive.com.**

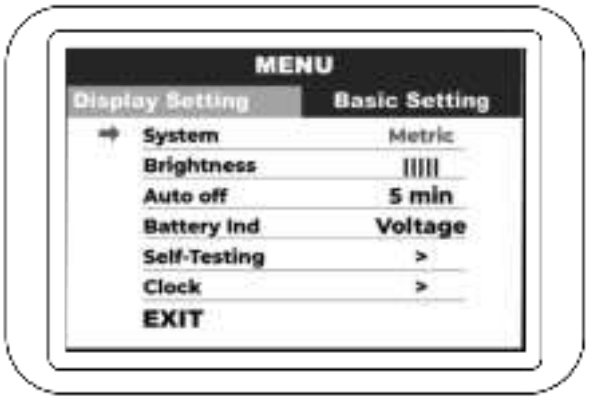
Short press MENU button can change the speed mode between speed, average speed, and maximum speed. Short press POWER button can change the milage mode between trip, ODO, and time.

Figure 5A



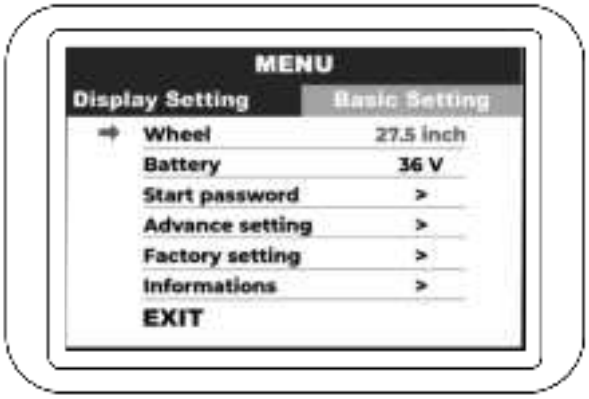

Double press the MENU button to enter the setting menu. Press the POWER button to change between Display Settings and Basic Settings. Using UP/DOWN buttons you can select the relevant parameter setting, and pressing MENU will change the setting. To exit the setting, double press MENU.

Figure 5B



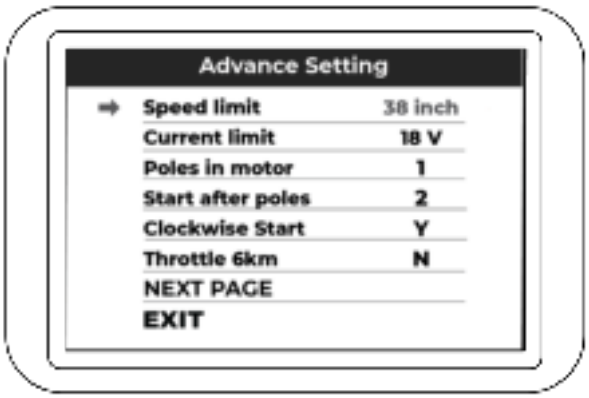
The default settings of the bike are shown in the picture. Using the system menu, you can choose between metric and imperial units. The brightness of the LCD display can be set between 1-5 level. The Auto-off function turns off the display after a set value of minutes. You can also turn it off to keep the display on indefinitely. The battery indicator shows the battery level in voltage and percentage, and you can also choose to turn this off. The self-testing menu gives you the option to run a self-test on the ebike components, i.e., Controller, PAS sensor, speed sensor, throttle, motor hall sensor, and brake sensor.  In the clock option, you can set the day, date, and time.

Figure 5C



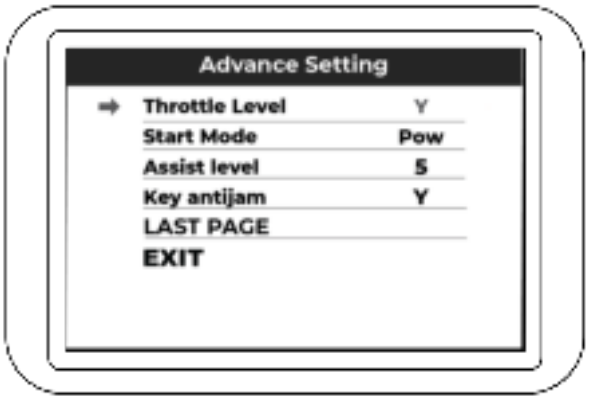

The wheel size refers to the rim diameter; the supported range is 12-31 inches. The battery voltage has 24V,36V,48V options along with a user-defined value option. The start password gives you the ability to enable a password when turning on the ebike. Factory settings can help reset the factory settings, and the information menu gives you information on the ebike statistics.

Figure 5D



To enter the Advance settings, you need to input the default password “1919”. The speed limit on your ebike is set between 35-38 km/h as the default value. Although the maximum permissible speed for ebikes is 32km/h in Canada, this value is set slightly higher than the limit because the loaded speed will always be lower than this maximum value. The user’s responsibility is to ensure they never exceed 32km/h speed when riding to stay within the legal limit. The current limit range goes from 6A to 50A and depends on the battery and motor you are using. The poles in motor settings refer to magnetic poles inside the motor and start after poles refer to poles speed sensor needs to detect before controller turns on the motor. Clockwise start refers to speed sensor turn direction. The throttle settings decide the speed at which the bike will run when in walking mode. You can limit it to 6km/h or set a speed depending on the assist level or set a maximum speed, as seen in the next picture.

Figure 5E




Selecting Y will throttle speed according to the assist level. The other option is N represents maximum speed. The start mode is power, eco, and standard, and each uses a different set of power. The assist level can be defined using programmed options 3,5,8, or users can input their value.

- You do not need to change any of the default settings. Please do not do so if not necessary. Wrong settings may stop the system from functioning, cause loss of some functionalities, or damage components of the ebike
- There is a small battery in the 750c LCD display that gets charged during use. If the new bike is not used regularly, the battery will not gain sufficient charge to stay powered for long periods. If needed, leave the display on for 72 hours by turning the auto off setting from the default of 5m to “OFF,” this should charge the cell sufficiently
- Make sure PAS (pedal assist) is at level 0

## 5.4. HAND THROTTLE CONTROL

- ENVO bikes are equipped with a thumb throttle located on the left side of the handlebar
- Like on a motorcycle, a bike throttle is designed to let the user apply 0-100% of the motor's power at will. The throttle can act independently or in tandem with or without PAS (Pedal Assist System)
- When the pedal-assist mode is set to "1 or higher", the throttle will accelerate the bike forward. You control the throttle by pushing on the thumb attachment. The farther the throttle switch is from its resting position; the more power is delivered to the motor to accelerate the ENVO Electric Bike
- When you want to slow down, you release the throttle and let it return to its resting position, and simultaneously apply the brakes. The ENVO Electric Bike also comes with a Throttle Override function, which allows the throttle to work in pedal assist modes

## 5.5. BRAKES

- Your Electric Bike is equipped with Hydraulic disc brakes for maximum reliability. Applying pressure to the brake levers will cause the brake pads to cause friction against the brake rotors, slowing the wheel. The more pressure applied to the brake lever, the faster the Electric Bike will come to a stop
- ENVO ebikes brakes are equipped with microswitches that cut off the motor power whenever the brake levers are squeezed. You should check the operation of your brake disconnect switch before every ride: While riding slowly in a controlled environment (like your driveway), engage the motor then squeeze each brake separately. The motor should lose power immediately and remain off as long as a brake lever is depressed

**⚠CAUTION**

**The cable switch can be disconnected, come loose, or malfunction – so always perform a check before you ride. Be sure to pull both brakes in an emergency or when you need the motor to disengage.**

- A circular brake sign will show up on the screen whenever you brake
- Always apply both brakes simultaneously. Applying only the front brake to slow or stop at high speeds may result in the rider being ejected from the saddle and continuing forward over the handlebars. It is best to apply even pressure to both brake levers when slowing or stopping

- Make sure that the brake lever does not contact the handlebar when full hand pressure is applied. If so, then the brakes must be adjusted by increasing the tension on the cable
- You may also adjust the reach on your levers by tuning the screw shown **Figure 5F**

**Figure 5F**

- With Hydraulic Brakes is it vital they are bled properly and by a certified bike mechanic – please service and maintain your brakes every 1000 Kilometers or every 6 months or whenever necessary. Brakes are a critical part of the bike and it is essential that both are working 100%.

## ⚠CAUTION

**Brakes need bedding in period before reaching max power. Before any serious riding, please bed in your brakes in a safe location**

- Simply roll down a hill or pedal to about 15km/h and apply brakes till the bike slows down and repeat about 15 times per lever. DO NOT let the bike come to a complete stop or let the wheels lock up
- Disc brake rotors become hot during use. Do not touch or come in contact with the disc rotor shortly after use
- Wet weather will require a longer distance to stop. Brake earlier and avoid sudden stops when riding in wet conditions

## 5.6. OPERATING RANGE

Expect a range of about 70 km with medium motor use, flat ground, light wind and for an average weight person.

The range on ebikes can vary greatly and are heavily dependent on these factors:

- Battery age
- Rider and luggage weight
- Road conditions (gravel or smooth)
- Tire condition and PSI
- Wind speed and direction
- Bike usage (heavy acceleration and high speeds will drain the battery faster)
- Road slopes or hills
- Pedaling power and gear selection
- Weather and temperature

## 5.7. MAXIMIZE YOUR RANGE

- Fully charge your battery before each ride
- Ride in pedal-assist mode as much as you feel comfortable- the more you assist the motor, the longer it will assist you
- Service your bike periodically, ensuring bearings run smoothly and the brakes do not rub the rotors or rims
- Minimize the weight you carry
- Lubricate the chain every few rides, more so if riding in the rain
- Clean the drivetrain as often as you can and at least thoroughly clean it once a month
- Avoid sudden starts and stops
- Minimize use of the throttle
- Check and adjust tire pressure

## 5.8. PRE-RIDE CHECKLIST

- Check if all the fasteners are tightened and not loose
- Check that brakes are functioning properly and that brake pads are positioned correctly
- Check alignment of handlebar and wheel
- Check tires are inflated with the correct pressure (3-4 bars)
- Check that tires have a good threat and no excessive wear
- Check that wheel spokes are not damaged or loose
- Check that handlebar and stem are aligned
- Check that bearing are lubricated and run freely without any grinding
- Check that pedals are tightened to the cranks
- Check that chain is clean, lubricated, and runs smoothly
- Check that frame is not bent or damaged
- Check that the hub motor is functioning smoothly and in good condition
- Check that battery has enough charging left on it
- Lock the battery and remove the key
- Check seat height
- Check lights and reflectors

# 6. ACCESSORIES

## 6.1. PANNIERS

- To effectively balance the weight on your bike, it is recommended that you use 2 panniers. This ensures weight is evenly distributed on both sides of the bike
- To install panniers simply pull the clips open **Figure 9A** and position the clips onto the top rail of the rack **Figure 9B.** Make sure they lock into place
- Wrap the Velcro straps around the rack stay **Figure 9C**

**Figure 9A**

**Figure 9B**

**Figure 9C**

## 6.2. BIKE RACK ADAPTOR - ENVO ST ONLY

- At ENVO we sell a bike rack adaptor
- These adaptors make it possible to place your step-through bike on your bike rack and take it on your next outdoor adventure
- The Instructions for use are located on the back of the product's box

# 7. MAINTENANCE & REPAIR

## 7.1. MAINTAINING PARTS

- Electric bikes like normal bikes need regular maintenance. The drivetrain needs cleaning and lubrication, the brake pads need to be changed periodically, and levers need to be bled if hydraulic or cables are changed
- In this manual we provide important basic guidelines on how to maintain and inspect your bicycle. We cannot teach you everything you need to know to properly inspect and service your bicycle. That is why we repeatedly urge you to take your bicycle to your bike mechanic for professional care and attention
- Make sure the tires are correctly inflated, check them by using a tire pressure gauge
- Your bike should be periodically cleaned, and tires should be changed when tread is below manufacturers recommended tread depth
- It is very important that you understand the type of wheel securing method on your bike, that you know how to secure the wheels correctly, that you know how to apply the correct clamping force that safely secures the wheel. Ask a bike mechanic to instruct you in correct wheel removal and installation and ask him to give you any available manufacturers instruction
- ENVO bikes have two ways of securing the wheels – front wheels are secured using the hollow axle with a shaft (“skewer”) running through it which has an adjustable tension nut on one end and an over –center cam on the other. The back wheel uses a Hex nut and hex key bolts, which are threaded onto the hub axle
- We highly recommend that you carry a spare inner tube when you ride your bike. Have an authorized mobile mechanic’s number handy when riding
- Never inflate a tire beyond the maximum pressure marked on the tire’s sidewall. Exceeding the recommended pressure may blow the tire off the rim which could cause damage to the bike and serious or fatal injury to the rider and injury to bystanders
- We recommend that you frequently check the kickstand and tighten the bolt as the high stress put upon by the spring can cause the bolt to loosen over time

## 7.2. IN CASE OF ACCIDENT

**If you have an accident, drop your ebike or your ebike falls over, your ebike is unsafe to ride until you follow the instructions included in this section. Failure to follow these instructions could lead to component or bike operation failure which could lead to serious injury or death.**

1. Remove the battery before performing any additional service, inspection, or maintenance on your electric bike. Failure to remove the battery could lead to the bicycle turning on unexpectedly, causing serious damage or injury
2. Read, understand and comply with the drive system user manual. Do not disassemble or attempt to service components unless you have been advised how to do so, explicitly in writing, by the ENVO Drive Systems
3. Check whether the wheels are still firmly fixed in the dropouts and whether the rims are still centered with respect to the frame or fork. Spin the wheels and observe the gaps between the frame and tire and between the brake pads and the rim sides
4. If the width of the gap has changed markedly and you have no way to true the wheel at your location, you will need to release the rim brake pads without touching them. Please note that in this case, the brakes may not act as powerfully as you are used to
5. Check the handlebars and stems to confirm that neither are bent or broken, and that they are level and upright. Make sure the stem is firmly fixed on the fork by trying to turn the handlebars relative to the front wheel. Briefly lean on the brake levers to make sure the handlebars are firmly fixed in the stem
6. Realign the components if necessary and carefully tighten the bolts to ensure reliable clamping of the components. The maximum torque values are printed directly on the components and/or specified in the enclosed operating instructions. If neither are available, contact ENVO support for assistance
7. Check whether the chain still runs on the chain rings and sprockets. If your bike fell over onto the chain side, check that the gears function properly. Ask someone to lift the bike by the saddle and carefully shift through all the gears. Make sure the rear derailleur does not get too close to the spokes as the chain climbs onto the larger sprockets

8. If the rear derailleur or the dropout/derailleur hanger is bent, the rear derailleur may collide with the spokes. This can result in damage to the rear derailleur, the rear wheel and/or the frame. Check the function of the front derailleur. A displaced front derailleur can throw off the chain, which will suddenly interrupt the drive of the bike, potentially leading to an accident, injury or death
9. Confirm the saddle is not out of alignment, using the top tube or the bottom bracket shell as a reference
10. Let your bike bounce on the ground from a low height. If there is any rattling, see where it comes from. Check the bearings, the bolts and the proper seating of the battery and the connectors, as necessary
11. Check the display. Are all the values displayed as usual? Do not use your bike if the display shows an error message or a warning. If necessary, switch off the system and wait at least 10 seconds before turning it on and checking it again

**Do not set off on your bike with drive assistance if the control element shows a warning. Doing so could lead to serious injury or death.**

12. Take a good look at the whole bike to detect any deformation, colour changes, cracks. Ride back very carefully or walk your bike back to a professional mechanic and have the mechanic check the bike and help resolve any issues
13. If you have had an accident and are unsure whether your bike will function properly, leave your bike rather than risk riding and endangering yourself and others
14. If you do ride your bike, do not accelerate or brake hard until the bike has been checked by a bike mechanic
15. Deformed components, especially those made of aluminum, can break without previous warning. If this occurs, they may not be repaired, i.e. straightened, as the imminent risk of breakage will remain. This applies in particular to the fork, the handlebars, the stem, the cranks, the seat posts and the pedals. When in doubt, you should replace these components
16. At no time should you make any modifications to your ebikes electrical systems, unless they are explicitly approved by the manufacturer in writing
17. Contact your dealer or ENVO support for repairs and replacement parts in case of damage

## 7.3. TROUBLESHOOTING TABLE

For any additional troubleshooting help, refer to **support.envodrive.com** or contact your local ENVO Electric Bike dealer.

| COMPONENT | ISSUE | CAUSE | SOLUTION |
|---|---|---|---|
| **Charger** | Charger gets hot | This is normal | Give the charger plenty of space in a well ventilated room |
| **Battery** | Power cuts and screen turns off | Low charge | Charge the battery |
| | | LCD display connector is loose | Reconnect and check all other connections inside the controller housing |
| **Battery** | Mounting bracket is melted | Dust and dirt may cause loose connections between connection pins which can cause sparking that leads to melting | Make sure to frequently keep connections clean and secured. Order replacement parts |
| **Battery** | Battery does not charge up with standard charger | Battery is already fully charged | Read battery voltage when the system is on, on page 3 of screen, (double clicking middle screen button). Above 41V for 36V is considered full, and above 53V for 48V is considered full. Press the power button. 4 lights on then is 100% |
| | | Charger does not function | Green LED may turn on when charger is plugged into battery but not connected to the wall. Check all connections are tight Try different plugs as well as different charger cables |

| | | | |
|---|---|---|---|
| **Pedal Assist** | System is on, Pedal Assist is not working, but the throttle is working | PAS sensor is disconnected | Check wires and connections or restore parameters to default |
| **Throttle** | System is on and the throttle not working but the Pedal Assist is working | Throttle has a connection issues | Check connections |
| | | Throttle magnet can see interference from any nearby metal objects | Try moving metal objects further away from throttle |
| | | Error info 01 | Check throttle positioning. Clean throttle area. It may be stuck on something, make sure you leave some space around the throttle |
| **Motor** | Motor making noise | This is normal when motor is under heavy load (hills, heavy cargo) | Try giving motor more assist under heavy loads |
| | | Motor vibrations causing resonance on other bicycle components | Reposition parts and add vibration damping between parts, make sure motor is secured |
| **Motor** | System is on but motor has no power | Loose connections | Check connections and reconnect, make sure to align arrows |
| | | Brake cut off sensor is malfunctioning | Disconnected the brake cut off sensor, check if motor is powering |
| | | Battery not sufficiently charged | Check battery voltage,. If below 34V the system will turn on but motor will not give power |
| **LCD Display** | Everytime I restart the ebike the display clock needs be reset | LCD has small battery inside that does not come fully charged | Small battery needs to be charged for 72 hours. Refer to section 5.3. |

| | | | |
|---|---|---|---|
| | Error 30H | Occurs when green pin connection comes loose or disconnected, or pins become bent | Check the connection, Pins should be straight, recconnect if disconnected |
| **Gear shifter** | Gears skipping | Derailleur not in optimal position for gear | Adjust derailleur position with barrel adjuster located on the shifter |
| Brakes | Brakes making noise | Brake pads are rubbing on the rotor | Pads need to be adjusted. Adjust the cable tension to shift the left pad, use an Allen key to adjust the right pad. The pads should be adjusted so the rotor spins freely in the middle of the two pads |
| | | Brakes not bedded in properly, material buildup is causing noise | Lightly sand and clean rotors and pads. Bed in your brakes, see section 5.5. |
| **Fenders** | Front fender is making noise | Front fender is too close to the tire and is rubbing | Fender needs to be adjusted, try lifting it up and moving it away from the tire, may need some slight bending, make sure you have secured it in its highest position |

## 7.4. RECOMMENDED SERVICE INTERVALS

It is important to inspect and service the electric bike to maintain optimal performance. The recommended service is only a guideline, every bike is used differently, and its wear and tear are accordingly.

| INTERVAL | INSPECT/SERVICE |
|---|---|
| Every Week | • Check bolts and fasteners for proper torque value<br>• Check chain, freewheel, and derailleur for proper alignment<br>• Check if wheels are true<br>• Check frame for any scratch or damage<br>• Clean frame by wiping with a damp cloth<br>• Use barrel adjuster to tension brakes and derailleur if needed |
| Every Month | • Check brake pad alignment<br>• Check if gears are shifting properly<br>• Check brake and gear cables for rust<br>• Check spoke tension<br>• Lubricate drivetrain<br>• Check torque values of pedal and crankset<br>• True the wheels<br>• Check bearing adjustment<br>• Check rim for wear<br>• Lubricate forks |
| Every 6 Month | • Inspect chain, freewheel, and derailleur<br>• Lubricate handlebar stem<br>• Lubricate seat post<br>• Grease bearings<br>• Replace brake pads<br>• Replace tires if necessary<br>• Replace cables if necessary |

- If you see a crack in any part of the bike, replace that part immediately as a crack and grow without any warning and may break the part during operation
- If you see any rust on the ebike, make sure to clean the bike and lubricate it properly. If the rust is excessive, replace the part
- Make sure to avoid scratching or gouging any surface as these are stress concentration points that could lead to crack formation
- If there is any noise coming from the ebike, investigate its cause and make sure to rectify the problem as soon as possible

## 7.5. CHANGING DISC PADS

Figure 7A

Figure 7B

- Remove bolts securing calipers
- Remove pad retainer bolt
- Remove the disc pad pin
- Remove used disc pads and use flat screwdriver to push caliper pistons fully back
- Place new disc pads with disc pad spring in position, insert disc pad pin through the hose on caliper. Bend the open end of pin to keep the pin from moving out **Figure 7B**
- Spin the wheel and make sure it is clear between the rotor and disc pads **Figure 7B**

## 7.6. CHANGING BRAKE FLUID

Figure 7C

Figure 7D

The hydraulic disc brakes use mineral oil based braking oil. You can use mineral oil by other brands but make sure the oil used is rated for use in bike braking:

- Connect the syringes to plastic tubes and connect the adaptors to the other end of plastic tubes
- Remove the bleed screw on caliper **Figure C**
- Connect on of the syringe with adaptor to the bleed hole on caliper
- Remove bleed screw **Figure D**
- Use the syringe connected to caliper to draw out the used brake fluid, keep it in a container
- Draw fresh brake fluid into the syringe, make sure that there is no air bubble in the brake fluid then connect the adaptor to caliper

Figure 7E

- Connect the other syringe with adaptor to brake master cylinder. Pump the syringe at caliper side to inject brake fluid into the system until fluid flows into the other syringe at the side and both syringes have roughly equal amount of brake fluid.
- Remove the syringe, push syringe to get air out and connect syringe back
- Pull brake lever fully back and use hand or a piece of string (cable tie etc.) to keep holding the brake lever
- Pump both syringes alternatively until no air comes out from the system
- Remove the adaptor on caliper side and resume the bleed screw
- Release brake lever pump the syringe at brake master cylinder side few times until no air comes out
- Remove the adaptor on the side and resume the bleed screw
- Pump brake lever 5~8 times to check bite point. If bite point is too low, redo bleeding procedures **Figure E**
- If bite point is correct, bleeding is completed
- Clean the system by using a clean cloth and cleaning naphtha

# 8. TRANSPORTATION & STORAGE

## 8.1. TRANSPORTATION

- Please remove the battery and turn it off before transporting the bike. Batteries are not designed to be on the bike while being transported
- Store the battery in a secure location
- Misuse of vehicle racks could result in a potentially hazardous situation resulting in injury or even death
- Always remove the battery before using a rack

## 8.2. STORAGE

- Always fully charge the battery before storage
- Always switch the battery off before storage or when not in use
- If you are storing the battery long term, check and charge the battery every 2 months
- Always store the bike somewhere where it is protected from rain, snow, or sunlight
- Store the battery in a cool, well-ventilated room at room temperature
- You may also seal the terminals with tape to protect against any short circuit
- Make sure the charging port is covered

# 9. GENERAL TERMS & WARRANTY

## 9.1. WARRANTY

- All products including ebikes and conversion kits, as well as components purchased including motor, controller, display, battery, charger, throttle, PAS sensor, brake sensors are covered by 12 months FREE warranty unless otherwise specified. You can purchase an extended warranty up to 24 months where offered
- Although our warranty is designed to ensure you receive a perfect product at the time of purchase your product will still require maintenance by the user

- Replacement mechanical parts such as chain, brake, tire, gear adjustment or loose screws or connectors are not covered under the warranty. The warranty is for intrinsic parts defects only
- We do not offer bicycle service and tune up as a part of warranty service
- The warranty supports you if you have intrinsically defective parts such as a cracked frame weld seam or controller circuit failure. It does not include labour or delivery
- Delivery of the defective products or parts for repair or replacement to our service shop is the customer's responsibility
- An ebike is a vehicle that functions in real working conditions and is exposed to unwanted impacts, shocks, vibrations, heat and cold, accidents, water penetration, salt splash etc. which may cause damage. These damages are not covered under the warranty
- If you find a defective product or part within the eligibility period, we supply will supply a free replacement part for you. You might be billed for the cost of delivery or installation fee
- If the problem is caused by an accident, wrong or careless installation by the customer, wire stretch, bad storage or not following the instruction manual, the customer will pay the cost of the part and replacement. The cause of the failure and warranty eligibility should be verified by the head of our technical department
- Our warranty terms and conditions apply to all customers purchasing our products through dealers, 3rd party or second hand
- To claim a warranty, please submit an application through our customer service ticketing system at **support.envodrive.com**
- If a warranty extension is offered for any of our products, you can pay the fee and get covered for the extension through the same terms and conditions. You may apply up to 1 day before the regular warranty period expires

### IMPORTANT NOTE:

**ENVO does not offer tune-up and bike mechanical services beyond limited installation or repairs of electrical system. Changing settings on the controller from the default manufacturer suggestion settings may cause damage the ebike components. That will void the warranty.**

## 9.2. REGISTERING YOUR PRODUCT WARRANTY

Please register your ENVO Drive Systems product by submitting filling out our product warranty registration form at **envodrive.com/warranty-registration**.

**IMPORTANT NOTE:**

**You must register your electric bike with ENVO Drive Systems within 30 days of purchase for warranty to be valid.**

## 9.3. EXCLUSIONS

ENVO is released and discharged of any liability for any damages, injuries or claims occurring as a result of neglect, the owner is responsible for the maintenance and safety of all structural and mechanical components of their ebike such as brakes, headset, forks, etc.

## 9.4. SATISFACTION GUARANTEED

We offer guaranteed satisfaction on all our products and services. We provide in-depth free technical sales support to ensure you choose the product that best suits your needs.

## 9.5. CUSTOMER SERVICE

Our highest priority is to provide the best customer service possible and cultivate a long lasting relationship with each client built on trust and respect. Our customer service is not passive; we are available to actively support you through all ordering or service procedures. We are happy to have in depth conversations with our customers about their requirements or problems. Our personal connection with each client is what differentiates us from common “No-Question” customer service models offered by Amazon or department stores.  At ENVO we are real hardworking people trying to bring great products and services to you in a way no one else does.

## 9.6. TROUBLESHOOTING, REPAIRS & TECHNICAL SERVICE

- We have a dedicated Help Center including a troubleshooting guide and user manuals to help customers maintain and fix their system in case of errors or failure. You are required to go through the guides and if the solution is not achieved contact our customer service through our ticketing system, providing all observations for our technicians to help figure out the issue
- 90% of cases can get to a solution at this stage by knowing the problem even without need for sending any replacement parts

- In case the issue is not diagnosed by standard ways; for our hub motor kits, ENVO ebikes, and other house brand products, since the electrical system is modular and has easy access. We would be able to easily send you replacement parts such as a controller to swap and test and return the defective one. You may be required to purchase the parts initially and pay for the shipping costs. You can return the unused parts for full refund later on
- Customers are required to have a level of technical knowledge with tools to recover their system remotely and safely without our assistance
- If at any stage of the diagnostics or even after parts replacement, it turns out to be a part intrinsic defect within the warranty criteria; we will refund the cost of the purchased component as accepted by warranty validated by the head of technical debt

# CONTACT

## LOCATION

**ENVO Drive Systems Inc.**
1685 Ingleton Avenue
Burnaby, BC V5C 3V6
Canada

## BUSINESS HOURS

Monday – Friday: 10am – 5pm PST
Saturday: 11am – 3pm PST
Sunday: Closed
*Please check online to see our most up to date hours*

## PHONE

**+1 (604) 423-3381**
**Toll free: (888) 229-2980**

## WEBSITE

**envodrive.com**
**support.envodrive.com**