

TECHNICAL MANUAL  
**E-CARGO**



25-09-2026  
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# DEVINCI

This manual has been designed to provide you with all the necessary information for the safe use of the Devinci E-Cargo cargo bike. You will find information covering the entire usage cycle of the bike, from its commissioning to its maintenance.

Like any vehicle, using an electric cargo bike carries certain risks of injury, property damage, and accidents. It is essential to understand these risks before hitting the road. The manufacturer, retailer, seller, or any other person involved in the design, distribution, or maintenance of the infrastructure cannot be held responsible for improper use of the vehicle or non-compliance with safety instructions.

This manual has been designed to help you use your electric cargo bike safely, efficiently, and optimally. Take the time to carefully read all sections to fully understand the operation of the bike, its features, its loading capacity, its usage limits, and the recommended maintenance procedures.

Your electric cargo bike is a versatile vehicle, designed for transporting goods, equipment, or passengers depending on the chosen configuration. To ensure your safety and that of other road users, it is your responsibility to keep the bike in good condition, to respect the prescribed load limits, and to adopt a cautious driving style adapted to traffic and weather conditions. Even when the bike is used correctly and maintained according to the manufacturer's recommendations, certain risks remain inherent to cycling and the use of an electric vehicle. These risks cannot be entirely eliminated and are the responsibility of the user.

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## **CONTACT DETAILS**

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# 1. VEHICLE INFORMATIONS

## 1.1 PLANNED USE

The Devinci E-Cargo is a cargo transport vehicle designed for use on paved roads only. The three wheels must always remain in contact with the ground. The Devinci E-Cargo is an electric assist bike and must be used as such.

## 1.2 DIMENSIONS AND PERFORMANCE

The main features of the bike are described below.

TABLE 1 : MECHANICAL SPECIFICATION

| DIMENSIONS                                  |                                                            |
|---------------------------------------------|------------------------------------------------------------|
| TOTAL LENGTH                                | 2750 MM (108.3 PO)                                         |
| TOTAL WIDTH                                 | 1280 MM (50.4 PO)                                          |
| TOTAL HEIGHT                                | 2080 MM (81.9 PO)                                          |
| CARGO VOLUME                                | 1935 L                                                     |
| DRIVER HEIGHT                               | 5' À 6'5"                                                  |
| WEIGHT                                      |                                                            |
| EMPTY WEIGHT                                | 340 KG (748 LBS)                                           |
| MAXIMUM LOADING CAPACITY (DRIVER AND CARGO) | 350 KG (770 LBS)                                           |
| TOTAL WEIGHT (BIKE, CARGO, DRIVER)          | 690 KG (1518 LBS)                                          |
| PERFORMANCE                                 |                                                            |
| MAXIMUM SPEED                               | 25 KM/H                                                    |
| ESTIMATED AUTONOMY                          | 30-35 KM BATTERIE SIMPLIFIÉE, 60 À 70 KM BATTERIE STANDARD |
| MAXIMUM SLOPE                               | 15 %                                                       |
| ASSISTANCE                                  | AU PÉDALAGE ET ACCÉLÉRATEUR                                |
| TURNING RADIUS                              | 2.6 M                                                      |
| BATTERY                                     |                                                            |
| CAPACITY (1 BATTERY / 2 BATTERY)            | 3200 WH / 6400 WH                                          |
| VOLTAGE                                     | 48 V                                                       |
| OPERATING TEMPERATURES                      | -35C À +55C                                                |
| RECHARGE TEMPERATURES                       | -35C À +45C                                                |

## 1.3 MECHANICAL COMPONENTS

The main mechanical components of the Devinci E-Cargo are presented below.

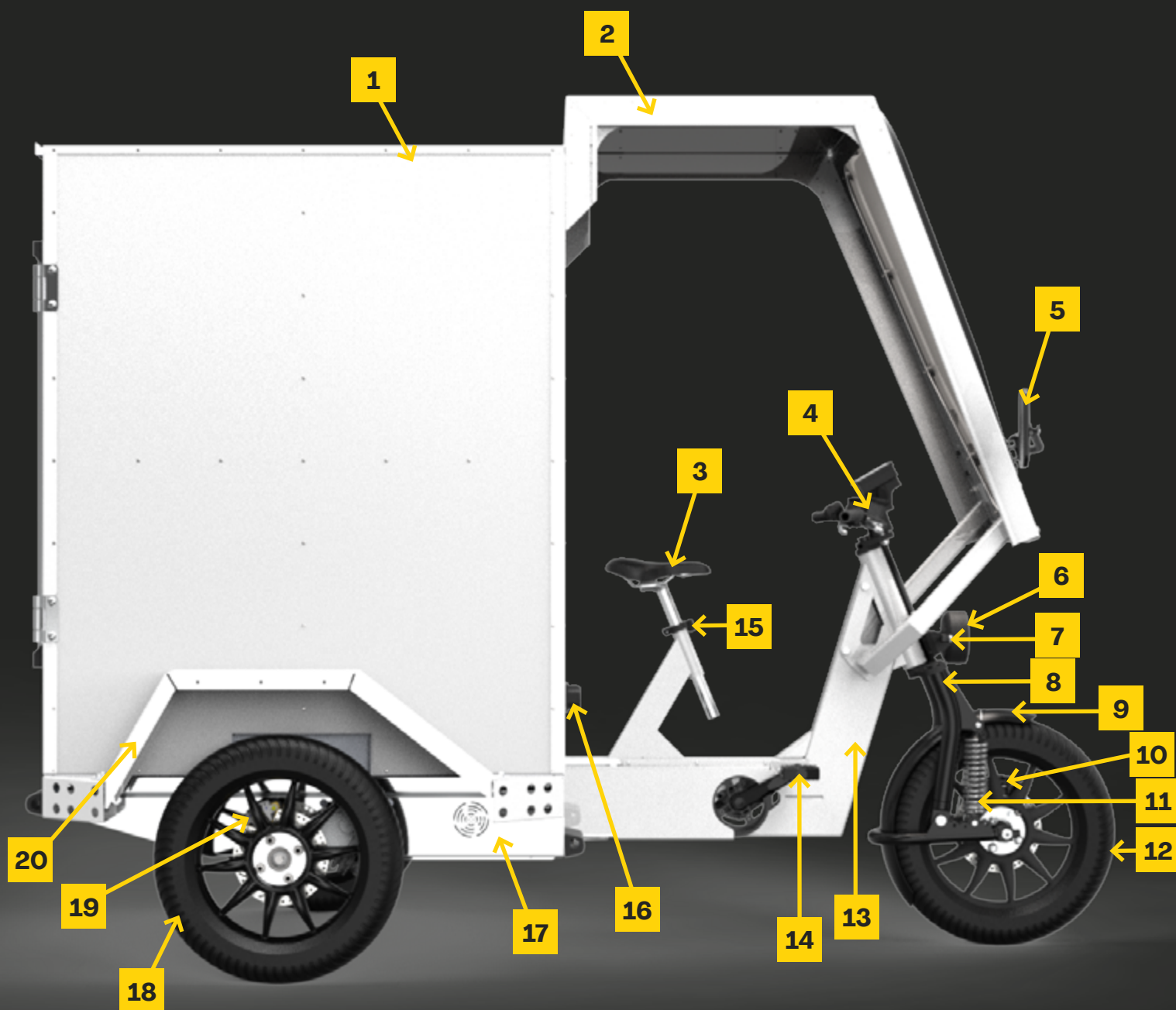


FIGURE 1 : SIDE VIEW OF THE BIKE

TABLE 2 : COMPONENTS FROM THE SIDE VIEW

|           |                   |           |                |
|-----------|-------------------|-----------|----------------|
| <b>1</b>  | Cargo box         | <b>2</b>  | Canope         |
| <b>3</b>  | Saddle            | <b>4</b>  | Handlebar      |
| <b>5</b>  | Rearview mirror   | <b>6</b>  | Front light    |
| <b>7</b>  | Front blinker     | <b>8</b>  | Fork           |
| <b>9</b>  | Front mud guard   | <b>10</b> | Front brake    |
| <b>11</b> | Front suspension  | <b>12</b> | Front wheel    |
| <b>13</b> | Front frame       | <b>14</b> | Pedals         |
| <b>15</b> | Tightening collet | <b>16</b> | Electric port  |
| <b>17</b> | Rear frame        | <b>18</b> | Rear wheel     |
| <b>19</b> | Rear brake        | <b>20</b> | Rear mud guard |

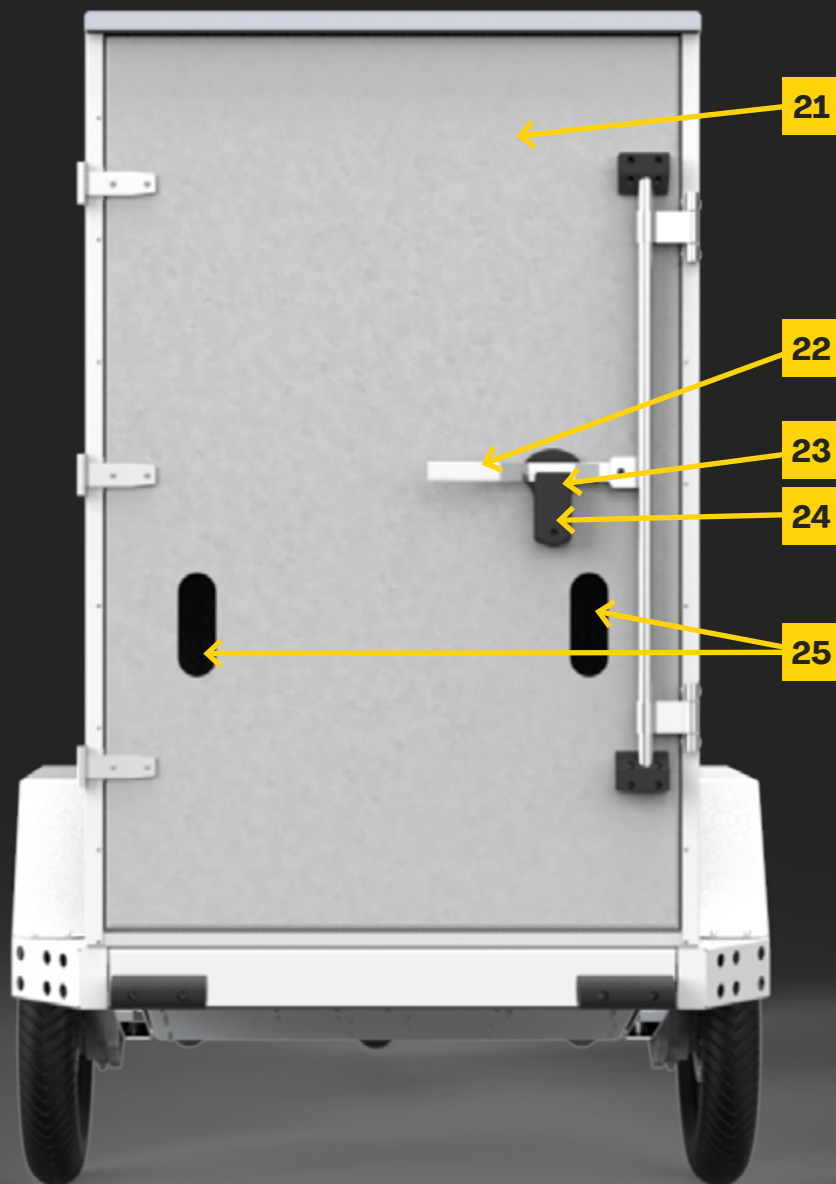


FIGURE 2 : REAR VIEW OF THE BIKE

TABLE 3 : COMPONENTS FROM THE REAR VIEW

|           |                        |
|-----------|------------------------|
| <b>21</b> | Door                   |
| <b>23</b> | Door lock              |
| <b>25</b> | Rear light and blinker |

|           |             |
|-----------|-------------|
| <b>22</b> | Door handle |
| <b>24</b> | Box lock    |

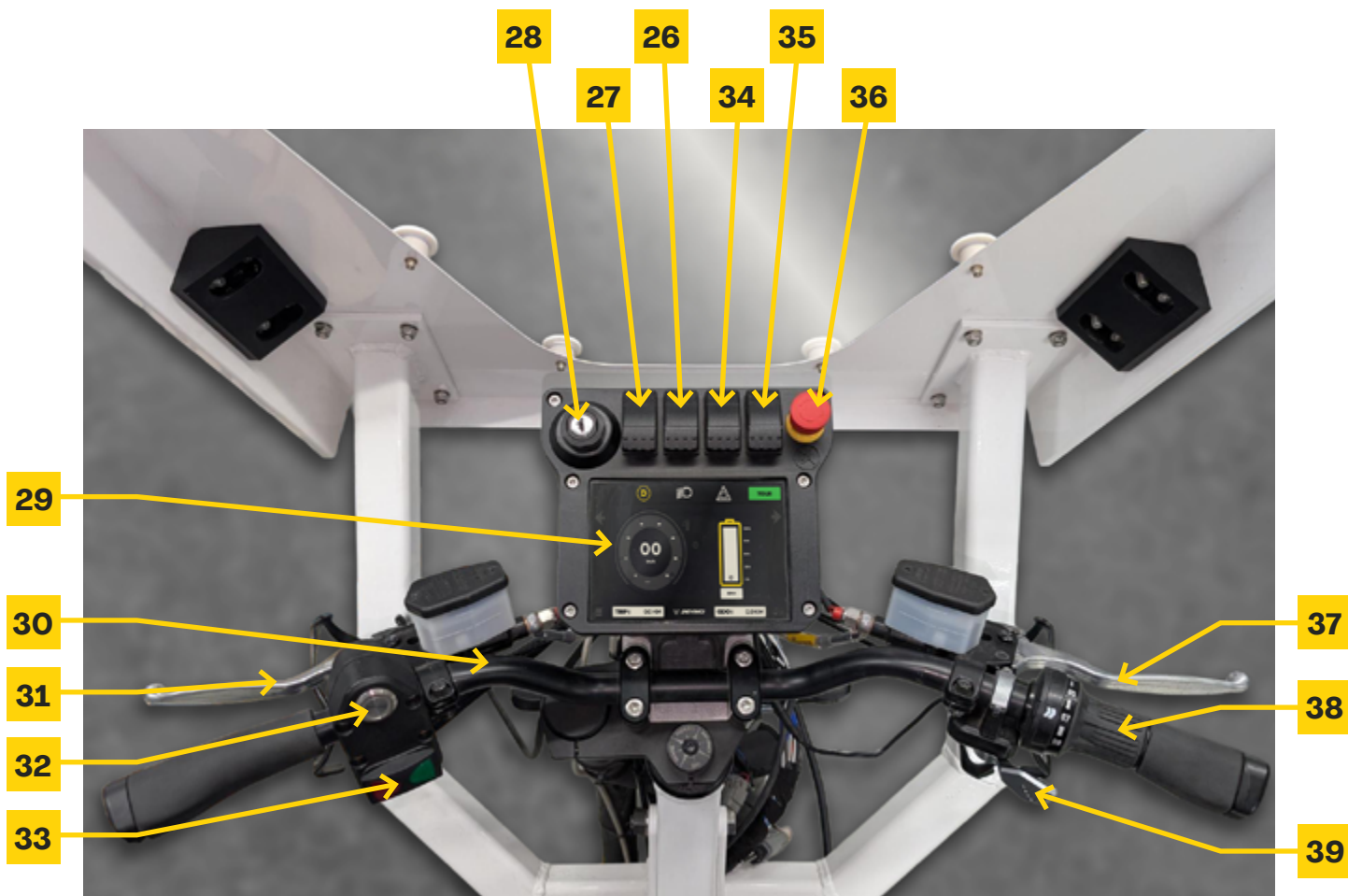


FIGURE 3 : COCKPIT VIEW OF THE BIKE

TABLE 4 : COMPONENTS FROM THE COCKPIT VIEW

|           |                           |
|-----------|---------------------------|
| <b>26</b> | Headlight switch low/high |
| <b>28</b> | Ignition switch           |
| <b>30</b> | Handlebar                 |
| <b>32</b> | Horn                      |
| <b>34</b> | Hazard light switch       |
| <b>36</b> | Emergency stop switch     |
| <b>38</b> | Twist shifter             |

|           |                                     |
|-----------|-------------------------------------|
| <b>27</b> | Foward/backward switch              |
| <b>29</b> | Screen                              |
| <b>31</b> | Front brake lever                   |
| <b>33</b> | Blinker switch                      |
| <b>35</b> | Assistance mode switch (TOUR/BOOST) |
| <b>37</b> | Rear brake lever                    |
| <b>39</b> | Accelerator lever                   |

## 1.4 DISPLAY

The screen as well as the switches are your means of interacting with the bike. The default position of the switches is upwards. They are then turned off or in base mode. The functions activated by these switches are described in their corresponding section. The different displays and their indicators are presented below:

### 1.4.1 MAIN SCREEN

Main screen for when the cargo bike is used normally.

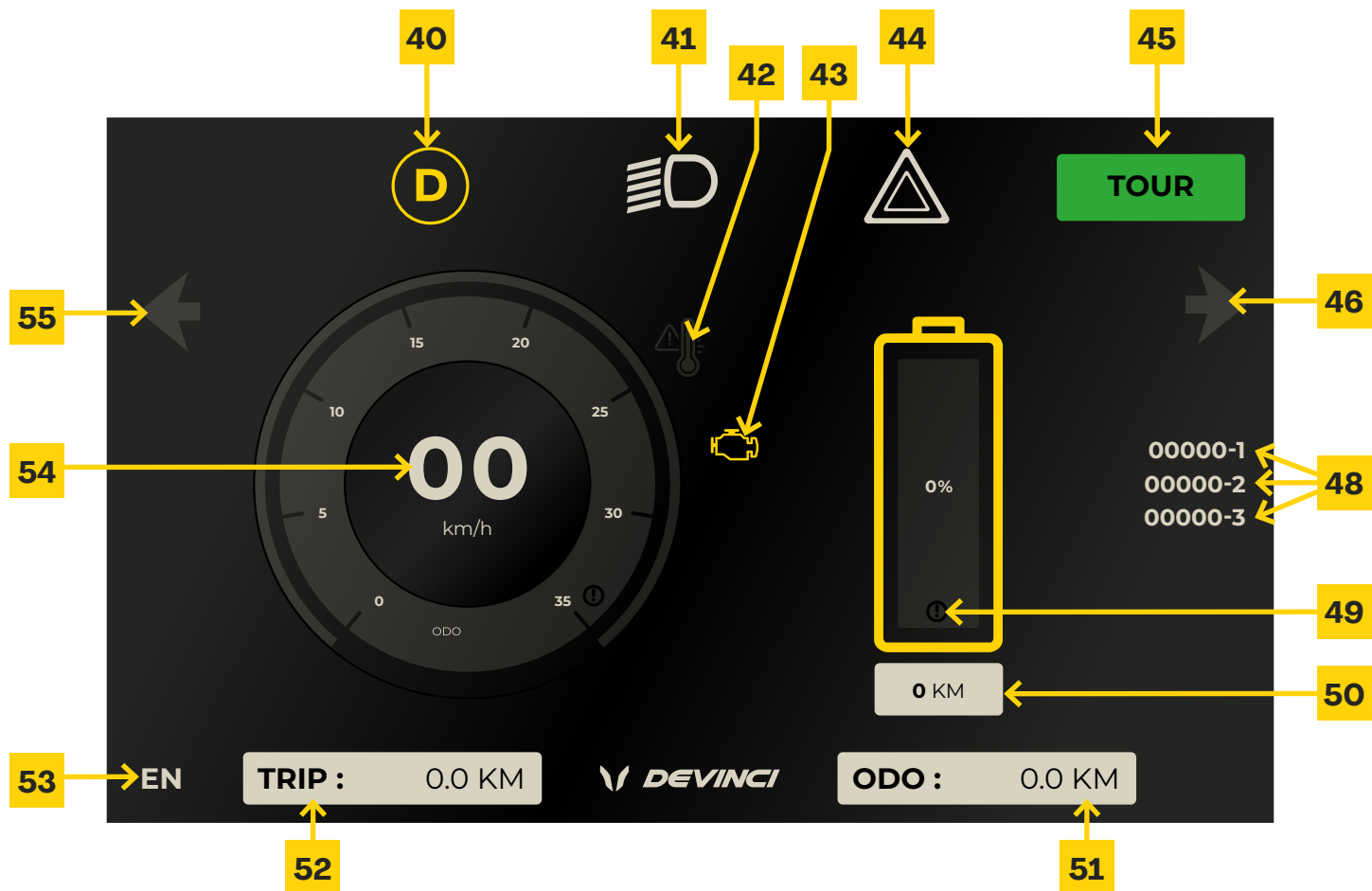


FIGURE 4 : MAIN SCREEN

TABLE 5 : ELEMENTS ON THE MAIN SCREEN

|    |                                           |    |                           |
|----|-------------------------------------------|----|---------------------------|
| 40 | Forward / Backward                        | 41 | Road / intersection light |
| 42 | Engine overheating indicator              | 43 | Check engine              |
| 44 | Hazard light                              | 46 | TOUR / BOOST mode         |
| 46 | Right turn signal                         | 47 | Battery percentage        |
| 48 | System error code                         | 49 | Low battery indicator     |
| 50 | Remaining kilometer estimator             | 51 | Bike odometer             |
| 52 | Distance traveled since the last ignition | 53 | Display language FR / EN  |
| 54 | Speedometer                               | 55 | Left turn signal          |

1.4.2 RECHARGE SCREEN

One of those screens appear automatically when the bike is connected by a charger.

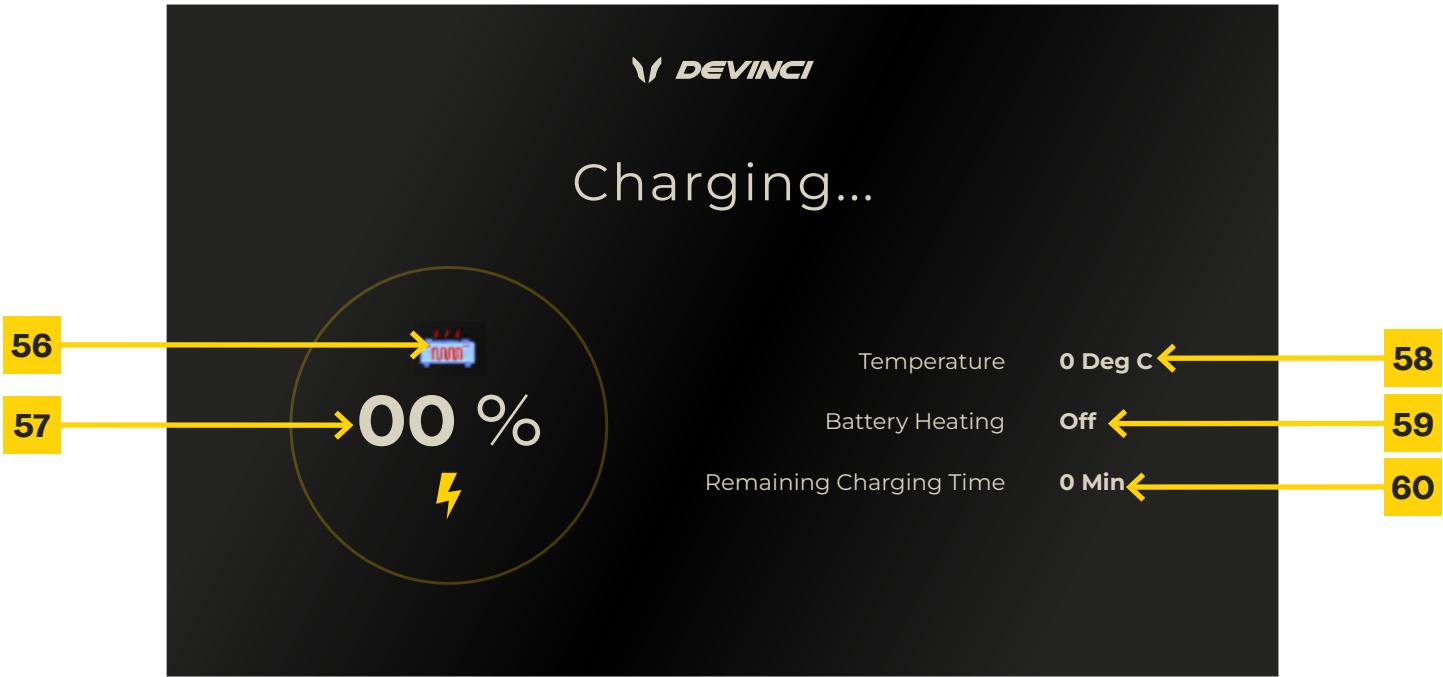
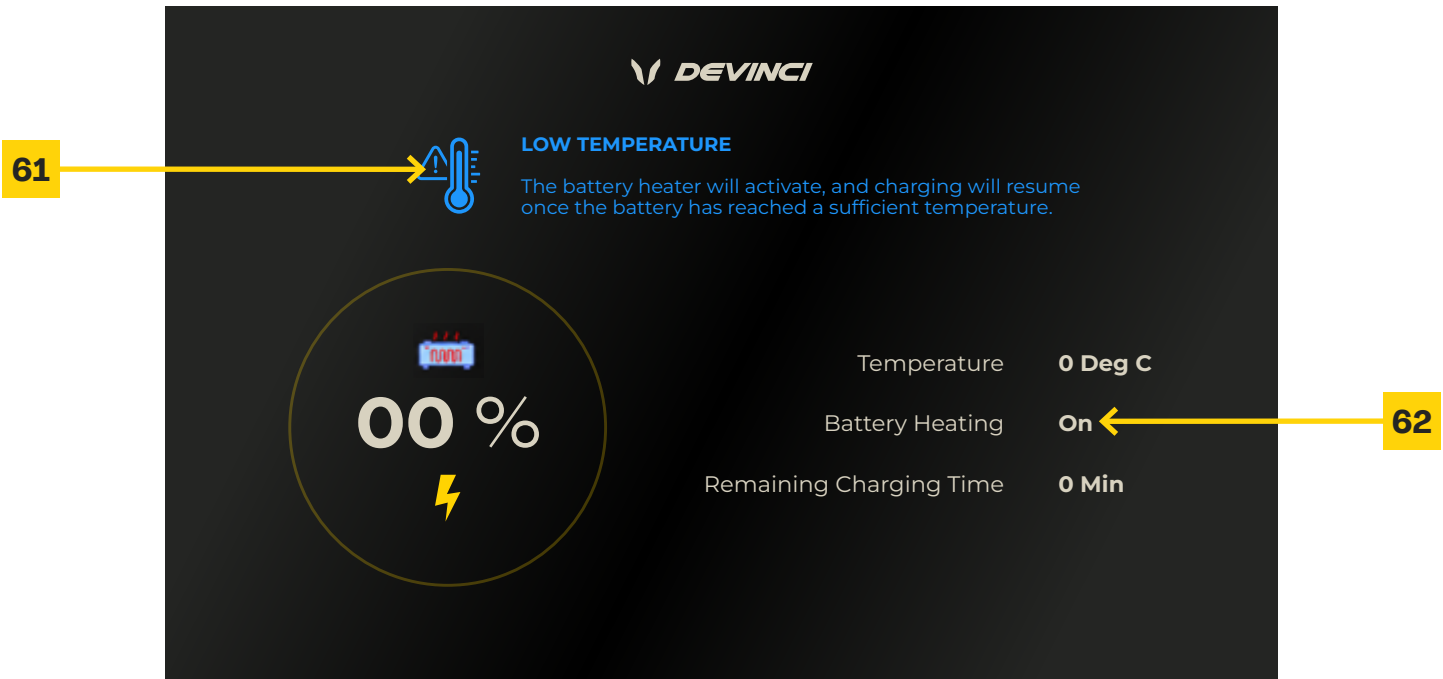


FIGURE 5 : RECHARGE SCREEN

TABLE 6 : ELEMENTS ON THE RECHARGE SCREEN

|    |                           |    |                            |
|----|---------------------------|----|----------------------------|
| 56 | Battery heater indicator  | 57 | Battery percentage         |
| 58 | Battery temperature       | 59 | Battery heater state (off) |
| 60 | Charging time left        | 61 | Cold battery indicator     |
| 62 | Battery heater state (On) |    |                            |

FIGURE 6 : RECHARGE SCREEN PAUSED BECAUSE OF LOW TEMPERATURE



### 1.4.3 POWER SUPPLY ERROR CODES SCREEN (BATTERY/CHARGER)

One of those screens appear automatically when an error occurs in the battery.

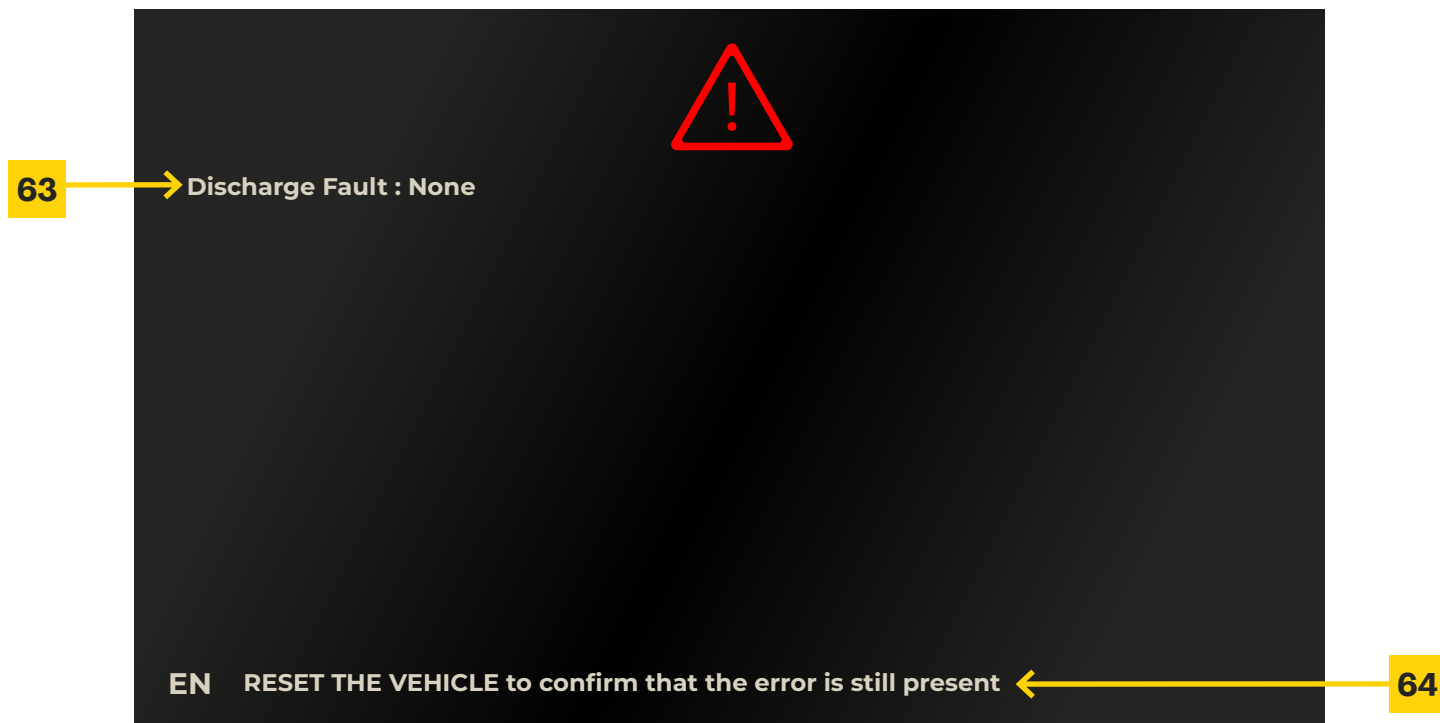


FIGURE 7 : DISCHARGE ERROR SCREEN

FIGURE 8 : CHAGE ERROR SCREEN

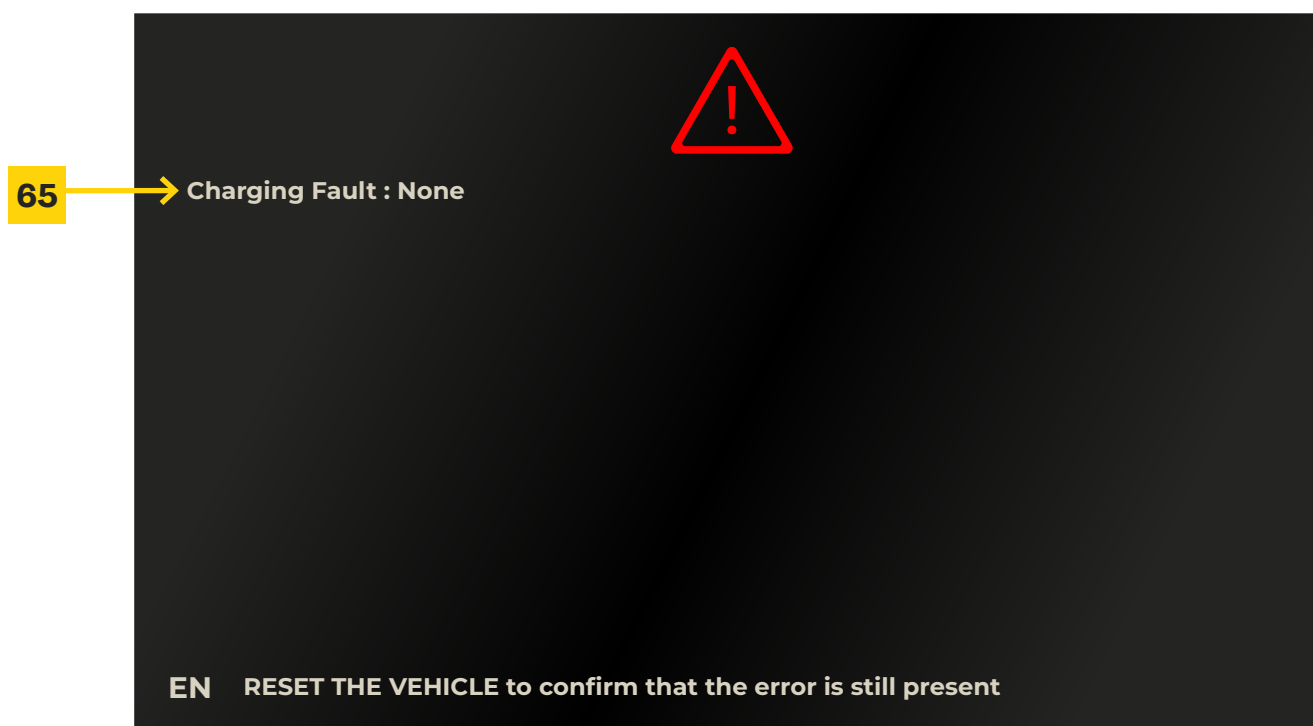


TABLE 7 : ELEMENTS ON THE ERROR SCREENS

|           |                                            |
|-----------|--------------------------------------------|
| <b>63</b> | Battery Discharging Faults and Error Codes |
| <b>65</b> | Battery Charging Faults and Error Codes    |

|           |                     |
|-----------|---------------------|
| <b>64</b> | Restarting the Bike |
|-----------|---------------------|

|           |                                                                                                                                                              |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>40</b> | Control the direction of the vehicle.<br>D means forward and R backward.                                                                                     |
| <b>42</b> | Displays in yellow when the engine is hot and red when its temperature is critical. If it is red, wait until it is at least yellow before setting off again. |
| <b>44</b> | When in operation, the hazard lights sign blinks as well as both turn signal indicators.                                                                     |
| <b>46</b> | The arrow indicator is blinking to the right.                                                                                                                |
| <b>48</b> | Displays the bike's error codes. Contact Cycles Devinci Inc. or a maintenance partner.                                                                       |
| <b>50</b> | Estimate the remaining kilometers based on current usage.                                                                                                    |
| <b>52</b> | Distance traveled since the last ignition.                                                                                                                   |
| <b>54</b> | Indicate the speed in km/h.                                                                                                                                  |
| <b>56</b> | Appears when the battery heater is in operation.                                                                                                             |
| <b>58</b> | Indicate the battery temperature during charging.                                                                                                            |
| <b>60</b> | Indicate the remaining time for the recharge.                                                                                                                |
| <b>62</b> | Battery heater status (On).                                                                                                                                  |
| <b>64</b> | Restart the bike once. If the error display does not return, you can set off again.                                                                          |

|           |                                                                                                                                                         |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>41</b> | The low beam headlights are always on. A blue indicator appears on the screen when the high beams are on.                                               |
| <b>43</b> | Displays a yellow or red engine light to indicate a problem with the engine. If the bike doesn't stop, you can return to your starting point by riding. |
| <b>45</b> | Depending on the selected mode, display TOUR in green or BOOST in red.                                                                                  |
| <b>47</b> | Indicate the remaining battery percentage as well as the corresponding remaining km.                                                                    |
| <b>49</b> | Low battery indicator. The indicator turns red below 10%.                                                                                               |
| <b>51</b> | Total distance traveled by the bike.                                                                                                                    |
| <b>53</b> | Display language FR / EN.<br>Click on the option to change.                                                                                             |
| <b>55</b> | The left arrow indicator is blinking.                                                                                                                   |
| <b>57</b> | Indicates the battery percentage.                                                                                                                       |
| <b>59</b> | Indicate the state of the battery heater ON/OFF.                                                                                                        |
| <b>61</b> | Appears when the battery temperature is below 0°C during charging.                                                                                      |
| <b>63</b> | Indicates that there was a malfunction with the battery. Check with Annex B.                                                                            |
| <b>65</b> | Indicates that there was a malfunction with the battery. Check with Annex B.                                                                            |

# **2. SAFETY**

Cycles Devinci Inc. recommends familiarization with and adherence to the instructions in this manual. The owner of the Devinci E-Cargo always remains responsible for its use by anyone.

## **2.1 SAFETY ADVICE**

Here is a non-exhaustive list of safety tips for using the Devinci E-Cargo. All other recommendations in this document are also applicable.

- Before your first ride with the Devinci E-Cargo, take the time to familiarize yourself with the dimensions, weight, and handling of the vehicle. Before your first ride with the Devinci E-Cargo, take the time to familiarize yourself with the vehicle's dimensions, weight, and handling. Be cautious when reversing, visibility is reduced.
- Properly adjust the mirrors for increased visibility of blind spots as described in section 3.2.2.
- Always wear the safety equipment required by the current regulations. Respect the Highway Safety Code as well as any applicable local regulations. Respect your limits and those of the vehicle indicated in this document.
- Reduce your speed before entering a turn.
- Allow sufficient braking distance, especially when the vehicle is loaded.
- Never exceed the maximum loading capacity.
- Distribute the load evenly in the loading box to maintain the vehicle's stability.
- Make sure the load is properly secured before each trip.
- Ensure that the doors, panels, or locking devices of the loading box are properly secured before hitting the road.
- Adapt your speed to the road conditions, the weather, and the weight of the load.
- Exercise increased vigilance when crossing slopes, cambered surfaces, or uneven terrain.
- Avoid sharp turns and sudden changes of direction when the vehicle is loaded.
- Perform a visual inspection of the vehicle before each use, including the tires, brakes, lights, mirrors, and load securing mechanisms.
- Make sure the battery charge level is sufficient before departure.
- Never use the vehicle if a component appears damaged or is functioning abnormally.
- Keep your hands on the handlebars and always stay aware of your surroundings.

# 3. BEFORE YOUR FIRST USE

This pre-departure guide aims to ensure an ideal setup of the Devinci E-Cargo before your first ride.

## 3.1 KEYS

Each Devinci E-Cargo comes with 2 sets of keys. It is imperative not to lose both of them. In such an eventuality, the locks must be replaced. It is recommended to place spare keys in a safe location and identify them with their respective bike.

## 3.2 ERGONOMIC SETTINGS

Before the first departure, the driver must ensure that these adjustments have been made for a comfortable and efficient drive.

### 3.2.1 SADDLE

It is very important to adjust the bike at the beginning of each ride to avoid any pain or injuries in the long term. That's why the saddle height (3) is adjustable.

To assist you with this adjustment, the seat post is graduated from 1 to 8. Since the Devinci E-Cargo will be used by several people, it is easy to remember which setting suits you, considering it represents the same height on all Devinci E-Cargo bikes.

To move the saddle, open the clamp (15) and pull or push on the saddle. If the saddle is stuck or the collar is not tight enough, it is possible to adjust the tightness with the screw on the collar.

To estimate the height of your seat post, you should, once seated on the saddle, place your heel on the pedal and your leg should be extended with the knee slightly bent.

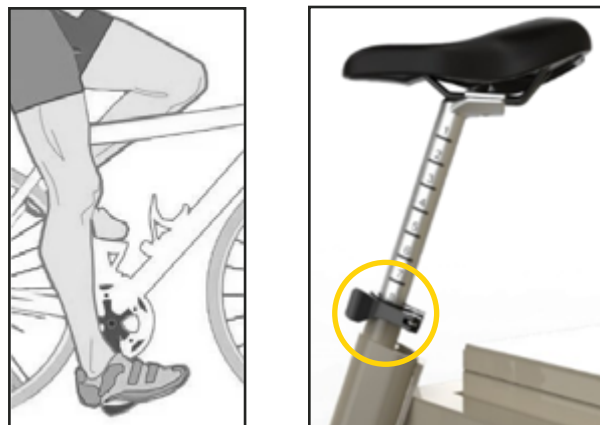


FIGURE 9 : EXTENDED LEG METHOD

Once your height is set using the method above, ride the bike and adjust the height as needed. The adjustments should be plus or minus 1 notch at most from the previously estimated value.

### 3.2.2 MIRRORS

To properly adjust your mirrors (5) before leaving, take your driving position and position the mirrors so that:

- To look directly beyond the loading area toward the rear.
- To see the horizon at 1/3 from the bottom of the mirror.

# **4. BEFORE EACH USAGE**

This section now aims to ensure the immediate and long-term integrity of the Devinci E-Cargo and its components before each departure. It is obviously required to make the adjustments from chapter 3 if another driver has used the bike before you.

A pre-departure checklist is provided at the end of appendix C.

## **4.1 BATTERY**

In order to have optimal range and battery lifespan, it is important that the battery is fully charged at the start.

If the bike is stored in the cold, that is below 10°C, it is to be expected that its range will be negatively affected if it is started immediately. It is recommended to store the bike in a room at 15°C. If that is not possible, bring the bike inside to warm it up before departure. This will optimize the battery life.

The procedure and characteristics of the recharge are presented in section 6.2.

## **4.2 TURN ON AND TURN OFF**

In order to start the vehicle, the driver must absolutely have a key. This is the only way to start the bike.

To perform this maneuver, you will need to insert the key into the ignition lock (28) and turn the key clockwise. The initialization phase of the bike may take a few seconds before the display is complete. Make sure to let the bike initialize before attempting any maneuver.

Indeed, if you try to move forward or perform a maneuver too quickly during the initialization phase, it is possible that the bike will no longer respond and an error code (48) will be displayed. The error code associated with this situation is 00032-2. In this situation, turn off and restart the bike without touching anything until it is fully initialized.

To turn off the vehicle, you need to turn the key counterclockwise. In an emergency situation, you can also use the emergency stop button (36). To do this, press the button and the vehicle assistance will be immediately turned off. To be able to start the vehicle again, you need to turn the button clockwise until it pops up.

## **4.3 CARGO LOADING**

To ensure the stability of the vehicle, it is important that the heaviest loads are at the bottom and at the front of the box (1). An unevenly distributed load can lead to the vehicle overturning. The bike has a capacity of 350 kg, including the rider and the cargo.

### 4.3.1 CARGO BOX

Before loading or unloading the box, always ensure that the handbrake is engaged. The use of the handbrake is explained in section 5.3. To open the box, first unlock the lock (24) by inserting the key and turning it clockwise.

Next, pull the black lever of the door lock (23) toward you, lift the door handle lever (22) by turning it upwards and finally turn the door outward. You can refer to figure 11 to perform this procedure.

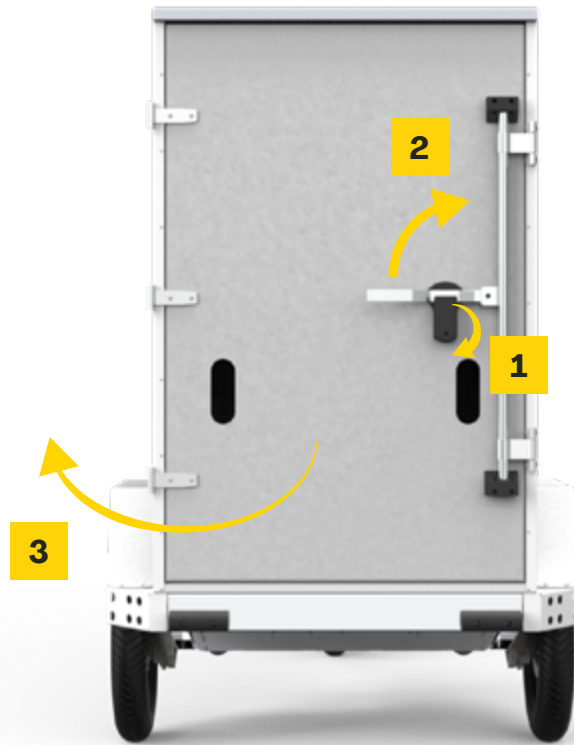


FIGURE 10 : BOX OPENING PROCEDURE

Perform the reverse sequence to close the box. The black lever (23) must be parallel to the box to be properly closed. Not performing this step correctly can lead to it opening when the vehicle is in mouvement.

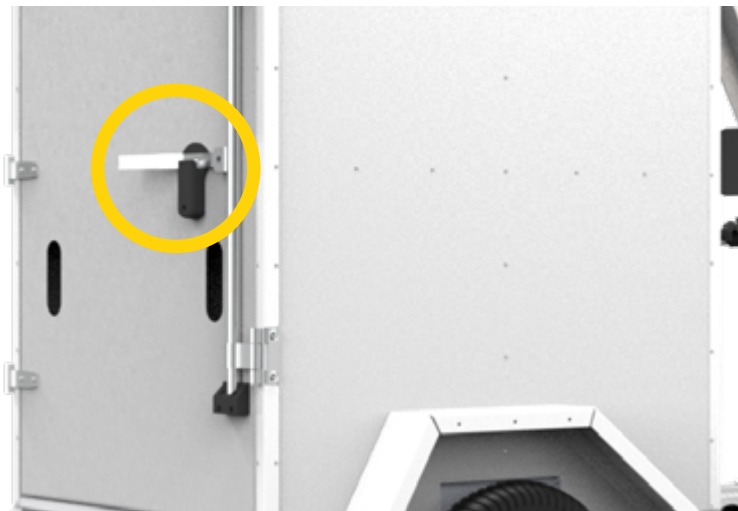


FIGURE 11 : DOOR LOCK WELL CLOSED

# 5. DURING USE

This section aims to mention certain important details for a ride without any issues.

## 5.1 AUTONOMIE

The range of the Devinci E-Cargo can depend on several factors, such as :

- Level of assistance
- Tire pressure
- Tire wear
- Age and condition of the battery
- Elevation of the route
- Road condition
- Wind
- Temperature
- Weight of the rider and the load
- Number of stops and starts

In optimal conditions, the maximum range of the bike is 40 km with simplified battery. Depending on usage, particularly in a package delivery context and equipped with the Canope and the large-format charging box (1935L), the range can vary between 25 km and 35 km per battery. This range of autonomy is highly variable depending on the factors mentioned above. It is recommended not to wait until the battery level drops below 10% before returning the bike.

Level 2 charging allows the bike to be recharged in urban areas using public network stations. An adequate and efficient use of this network ensures smooth and uninterrupted operation throughout the day.

## 5.2 ASSISTANCE AND SPEEDS

Two assistance modes are available. The TOUR mode and the BOOST mode.

The TOUR mode allows for optimized battery consumption and a smoother, safer ride. The BOOST mode allows for more power to be provided if needed, for example, to easily climb a steep slope. However, its use will reduce the range. The selector up means that TOUR mode is activated. The mode is activated with its selector (35) and is also displayed on the screen (45).

Assistance is accessible in 2 ways. By pedaling or using the accelerator lever (39). At startup, although it is possible to start the bike in both ways, it is recommended to do so with the accelerator lever. A low pedaling cadence at startup will result in the assistance not being instantaneous. Starting the movement will then require considerable effort. The assistance with the accelerator lever also allows for better speed control during maneuvers.

For a comfortable pedaling cadence while moving, it is possible to adjust the speeds with the rotary handle (38). Speed 1 corresponds to a low travel speed and speed 9 to a high travel speed. Adjust the speed of the crankset to that of the bike for a comfortable pedaling cadence.

5.2.1 REVERSE

A reverse mode is also available with its selector (28). In order to reverse, the vehicle must be at a complete stop.

The pedal (14) engages during the reverse movement. In this maneuver, it then turns in the opposite direction. It is therefore necessary to follow the movement of the crankset with your feet firmly on the pedals. It is recommended to select the highest gear ratio before reversing in order to reduce the rotation speed, for example, set the selector between gears 7 and 9. It is not necessary to pedal to change gears, simply change the gears without applying pressure on the pedals.

5.2.2 CLIMBING HILLS

In the event that you need to engage on an uphill slope with the cargo bike, it is unnecessary to exert more pressure on the pedals. Given the weight of the bike, even when unloaded, this effort has almost no effect. It is normal for the speed to decrease when going uphill.

Instead, activate BOOST mode (36) at any time and let the motor work. Switch the selector back to Tour mode after the incline to maximize range.

5.3 BRAKES

The brakes are used like classic bicycle brakes to reduce the speed of the moving vehicle. A press on the brake lever temporarily disables the engine until it is released.

The right lever (37) is equipped with a handbrake for complete immobilization even on a slope. To activate it, press the brake lever with your right hand until you are able to apply the lock (66) with your left hand. To release it, apply pressure on the lever until the lock moves by itself. It is important that the handbrake is engaged every time you get off the bike. Make sure it is properly deactivated when you start to have assistance.

Activating the brakes automatically cuts off the assistance, so it is impossible for the bike to move forward while simultaneously pressing the brakes and the accelerator.

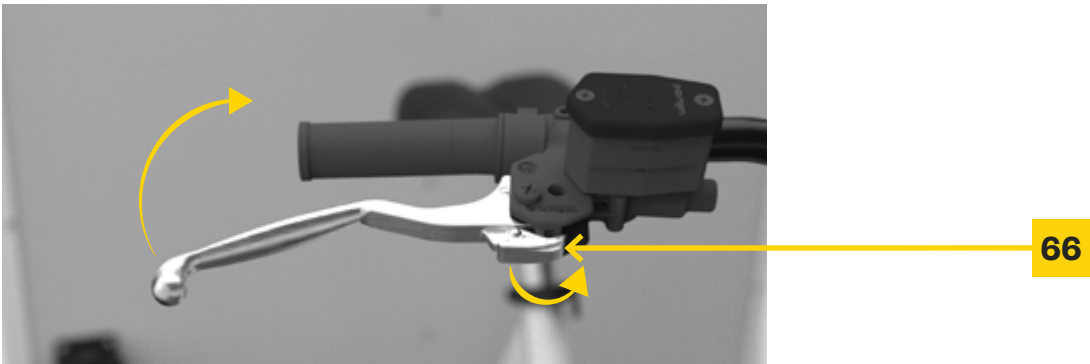


FIGURE 12 : HAND BRAKE USAGE PROCEDURE  
TABLE 8 : COMPONENT ON THE HANDBRAKE

|    |                   |
|----|-------------------|
| 66 | Hand brake loquet |
|----|-------------------|

## 5.4 LIGHTS AND SIGNALISATION

The bike is equipped with several tools to signal its intentions on the road and to be seen.

To activate the left turn signal, push the selector (33) to the left. To activate the right turn signal, push it to the right. It is important to return the selector to the central position after the turn to deactivate the turn signal, as it does not turn off automatically. The screen also indicates the activated turn signal (46, 55). To activate the horn (32), press the button.

The hazard light switch (34) allows all signal lights to flash. Switch it down to activate them and up to deactivate them.

The high beam switch (26) allows you to activate the high beam on the front light. It will then be more powerful. The front light is also always on in low beam mode. All options will be highlighted on the screen if they are in use.

## 5.5 BATTERY REGENERATION

During braking, the bike takes advantage of this dissipated energy to recharge the battery. This amplifies the braking power.

Activating the brakes automatically cuts off the assistance so that regeneration activates, making it impossible for the bike to move forward while simultaneously pressing the brakes and the accelerator.

Moreover, the battery regeneration automatically stops at 6 km/h and is disabled when the battery is charged to more than 97% or when the temperature is below 0°C. Adjust your driving accordingly.

## 5.6 TURNING RADIUS

The turning radius of the Devinci E-Cargo is 2.6m. It is important to reduce speed in turns to ensure a controlled turn without the vehicle tipping over or skidding.

# 6. AFTER USAGE

After the outing, the cargo bike can be parked and recharged. The procedure and characteristics of the recharging will be described here.

## 6.1 STORING THE VEHICLE

At the end of the journey, it is recommended to park the cargo bike in a temperate and dry warehouse. This optimizes the lifespan of the components and the battery. A temperature of around 15°C is optimal.

## 6.2 THE RECHARGE

Once the bike is parked, it is important to charge it to ensure its proper functioning for the next use. Level 1 charging is done with the charger provided with the vehicle, plugged directly into a 110v wall outlet.

It is also possible to use a level 2 car charging station. The level of the charging station does not affect the charging time.

If level 1 charging is used, make sure the electrical circuit is connected to a fuse of at least 15A. The charger must be used as is, without an extension.



FIGURE 13 : FIL CHARGING CABLE AND CHARGING PORT

Here is the time to expect to reach different percentages. These times may vary :

| POURCENTAGE | SIMPLIFIED BATTERY CHARGING TIME | STANDARD BATTERY CHARGING TIME |
|-------------|----------------------------------|--------------------------------|
| 0 % - 100%  | 150 minutes                      | 300 minutes                    |
| 0 % - 50%   | 60 minutes                       | 120 minutes                    |
| 20 % - 80%  | 80 minutes                       | 160 minutes                    |
| 20 % - 100% | 130 minutes                      | 260 minutes                    |

TABLE 9 : CHARGING TIMES BASED ON THE PERCENTAGE

It should be noted that it is normal for the charging to be faster for the first few percent. This is due to an internal management of the charging process that optimizes the battery's lifespan.

Before connecting the bike, make sure that the connector on the wire and the port (16) are clean and dry. (never clean the charging port with water directly in the connection) You can then ensure that the charging is in progress and monitor its progress by looking at the screen.

When the bike is charging and you want to start it, wait for the charging screen to turn off before turning the ignition key.

## **6.2.1 BATTERY PROTECTION MECHANISM**

Still with the aim of protecting the battery, it is possible that the bike will refuse to charge under certain conditions. If this happens, a special display will appear on the screen (figure 6). The conditions are presented below:

- 1.** If the charging cable is plugged in and the battery temperature is below 0 °C, the bike will not be able to charge temporarily, as the battery is too cold. The screen will display figure 6 to indicate that the battery needs to warm up. The cargo bike is equipped with a battery heater. It activates automatically when the temperature is below 0 °C and the charging cable is connected. The charging will start automatically as soon as the battery temperature is above 0 °C.
- 2.** If the charging cable is connected and the battery temperature is above a critical temperature, the bike will not charge. You must then wait for the internal temperature of the battery to drop below this critical threshold.
- 3.** The bike is equipped with fans that will lower the battery temperature, leave the charging cable plugged in. The charging will start automatically as soon as the battery temperature reaches the correct critical threshold. The fans also operate automatically for a short moment at startup and when the battery is above 30°C.

# 7. MAINTENANCE

The maintenance of the Devinci E-Cargo is essential for its proper functioning and the safety of users. Before any maintenance procedure:

- Stop the vehicle in a flat area on a hard surface.
- Engage the handbrake.
- Turn off the bike.
- Ensure its stability.
- Block the front wheel if necessary.

## 7.1 BASIC MAINTENANCE

Perform these maintenance and checks regularly.

TABLE 10 : TABLE OF BASIC MAINTENANCE

| GENERAL                     |                                                                                                                                                                        |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Check the seat post         | Check that the seat post is still adjustable.                                                                                                                          |
| Integrity of the assemblies | Check that there is no play in the following assemblies:<br>Handlebars, Wheels, Brakes, Crankset.                                                                      |
| CLEANING                    |                                                                                                                                                                        |
| Bicycle cleanliness         | Wash the bike and remove any accumulations of sand or salt. To clean the bike, use only water and a clean cloth.<br><i>IMPORTANT : Do not use high-pressure water.</i> |
| BRAKES                      |                                                                                                                                                                        |
| Cleaning                    | Clean the brakes with brake cleaner. Under no circumstances should oil or grease come into contact with the brakes.                                                    |

Also use the diagnostic table in Appendix A in case of mechanical failure or contact a Devinci maintenance partner.

## 7.2 ERROR CODES

The bike is equipped with a system for detecting error codes that may originate from the electrical system in case of a malfunction.

Battery error codes will automatically display on the screen as shown in figures 7 and 8. When a code appears, the action to be taken is also indicated on the bike’s screen. This information is directly taken from Appendix B of this manual.

The system codes will be displayed directly on screen (48) as shown in figure 4. If an error code appears, note the code, take a photo of the screen, and contact a maintenance partner if necessary for diagnosis.

## 7.3 UNDER THE FLOOR MAINTENANCE ACCES

The maintenance of certain bike components is done thru access under the floor of the loading box. Three distinct compartments provide access to:

1. Battery compartment
2. Electrical compartment
3. Propulsion behavior

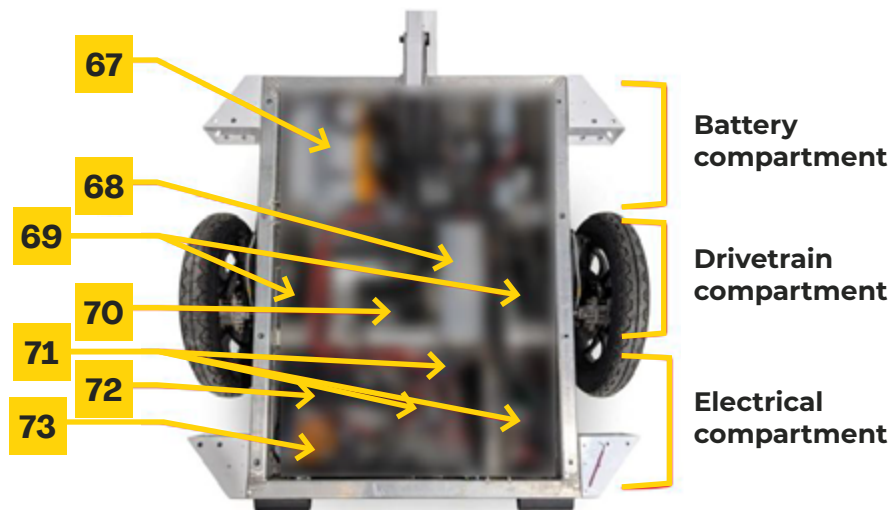


FIGURE 14 : LOCATION OF THE COMPARTMENTS

TABLE 11 : COMPONENTS BELOW THE FLOOR

|           |                 |
|-----------|-----------------|
| <b>67</b> | Battery         |
| <b>69</b> | Rear suspension |
| <b>71</b> | Fuse box        |
| <b>73</b> | Controler       |

|           |                           |
|-----------|---------------------------|
| <b>68</b> | Belt and pignon protector |
| <b>70</b> | Motor                     |
| <b>72</b> | Charger                   |

If you need to access the space under the floor, here are the steps to follow:

- With a 3mm Allen key, unscrew the three screws of the angle iron at the bottom right of the box.
- Remove the angle iron.
- Lift the floor, starting from the board closest to you, from the right side and remove them.

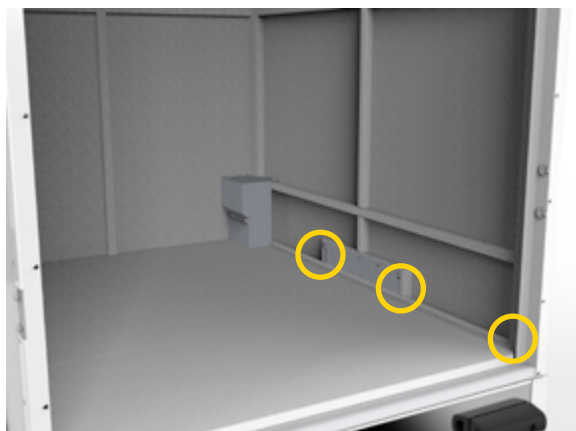


FIGURE 15 : SCREW'S LOCATION TO REMOVE THE FLOOR

To reinstall the floor, perform the steps in reverse.

Under the belt guard (68) are the belt and the sprockets. If the belt appears to have lost its tension, contact a maintenance partner.

The fuse boxes (71) serve as a last resort protection against electrical mishaps. In case of a surge or short circuit, it cuts off the current instantly. There is a 48V fuse box and a 12V one. In case of fuse problems, please refer to table 11:

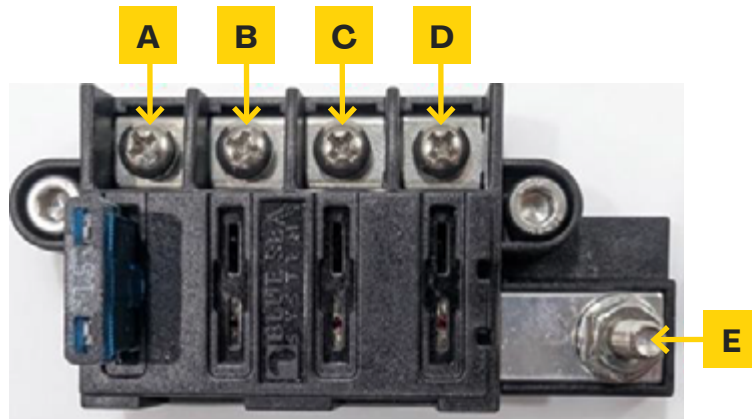


FIGURE 16 : 12V FUSE BOX

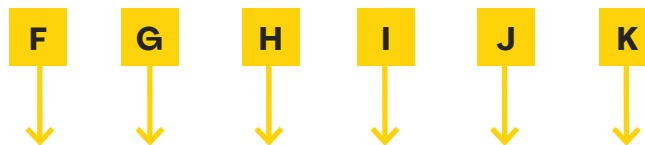


FIGURE 17 : 48V FUSE BOX

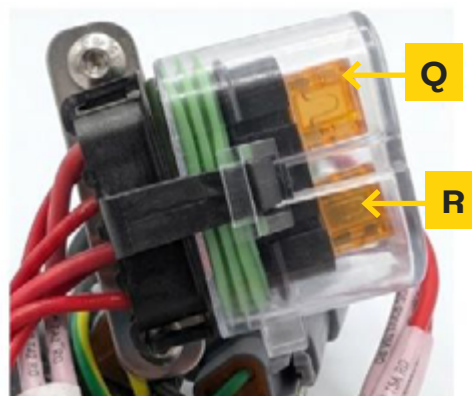


FIGURE 18 : 12V FUSE BOX (SCREEN AND TELEMETRY)

| POSITION | COMPONENTS                  | SYMPTOMS                                                   | SIZE |
|----------|-----------------------------|------------------------------------------------------------|------|
| <b>A</b> | PDM (IX3212)                | No accessories work other than the screen                  | 12V  |
| <b>B</b> | Screen / CANedge            | The screen and telemetry don't work                        | 12V  |
| <b>C</b> | Accessories fuse box        | None, no accessories connected                             | 12V  |
| <b>D</b> | Sapre fuse                  | -                                                          | 12V  |
| <b>E</b> | DCDC                        | -                                                          | 48V  |
| <b>F</b> | Battery 1<br>(Power supply) | -                                                          | 48V  |
| <b>G</b> | Not used                    | -                                                          | 48V  |
| <b>H</b> | Not used                    | -                                                          | 48V  |
| <b>I</b> | Not used                    | -                                                          | 48V  |
| <b>J</b> | Not used                    | -                                                          | 48V  |
| <b>K</b> | Battery 2<br>(Power supply) | -                                                          | 48V  |
| <b>L</b> | BAC 4000                    | Motor controler stays off<br>(No red led on the controler) | 48V  |
| <b>M</b> | DCDC                        | No accessories work<br>(light, horn,...)                   | 48V  |
| <b>N</b> | Charger                     | The bike doesn't charge                                    | 48V  |
| <b>O</b> | Killswitch                  | Motor controler stays off<br>(No red led on the controler) | 48V  |
| <b>P</b> | Not used                    | -                                                          | 48V  |
| <b>Q</b> | Screen                      | Screen doesn't work                                        | 12V  |
| <b>R</b> | CANedge                     | The telemetry doesn't work                                 | 12V  |

TABLE 12 : VEHICULE FUSE TABLE

## 7.4 WHEELS AND TIRES

The tires should not have any cracks or excessive wear, as this can lead to a flat tire or loss of control of the cargo bike. The recommended pressure is 40 PSI.

They should not be cracked, and the tread must maintain a pronounced pattern.

In case of a flat tire, here are the components to know and the steps to follow:



FIGURE 19 : JACK SUPPORT POINT

TABLE 13 : JACK'S SUPPORT POINTS

|           |                                         |          |                                        |
|-----------|-----------------------------------------|----------|----------------------------------------|
| <b>1*</b> | Jack mounting point for the front wheel | <b>2</b> | Jack mounting point for the rear wheel |
|-----------|-----------------------------------------|----------|----------------------------------------|

**\*(1)** Before placing the jack on the front frame, it is very important to unscrew the eyelets and push the brake line out of the jack's contact area.

**\*(2)** If you need to lift a rear wheel, place the jack at support point 2, which is located just in front of the wheel axle.



FIGURE 20 : 4 SCREWS' LOCATION

Procedure for changing a wheel:

1. Place the bike on a flat and hard surface. Remove the bike key and engage the handbrake.
2. Unscrew each of the 4 13mm wheel bolts a quarter turn.
3. Place the jack at the recommended support point.
4. Lift the bike until the wheel is 1 inch above the ground at most.
5. Finish unscrewing the 4 screws and remove the wheel and the plate.
6. Reassemble the new wheel onto the hub, not forgetting the aluminum plate.
7. Re-screw the 4 screws by hand and tighten them slightly with the wrench.
8. Lower the bike and remove the jack.
9. Lower the bike and remove the jack.

## **7.5 PERIODIC MAINTENANCE**

To ensure the bike's optimal performance, maintenance is essential. You will find in Appendix E a multi-point inspection table and a periodic maintenance table.

## 7.6 THE CARGO BOX

To remove the box, lift it using the four attachment points.

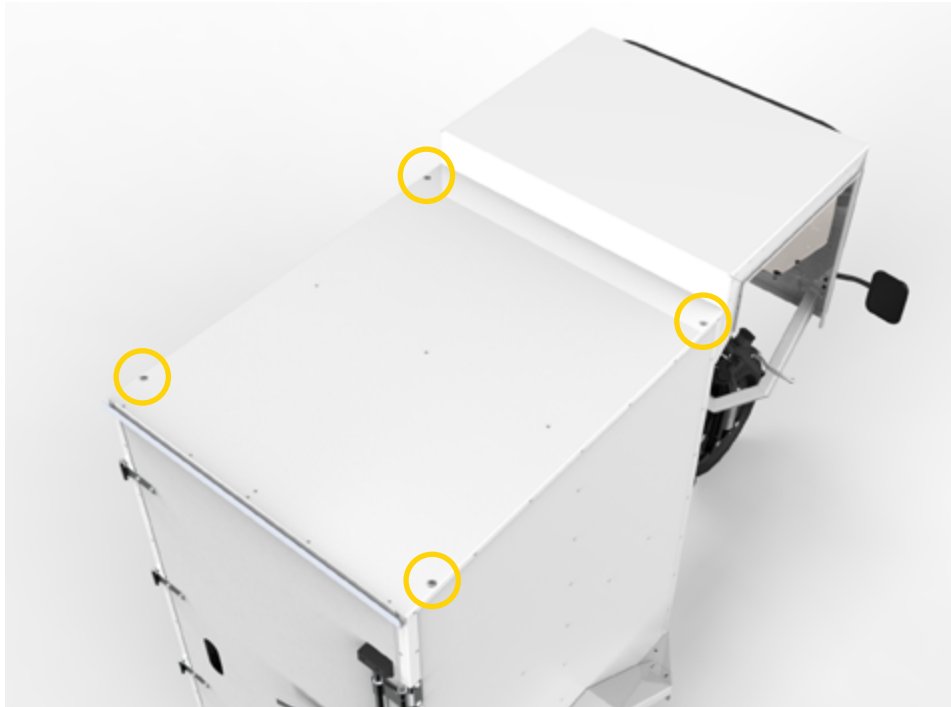


FIGURE 21 : ATTACHEMENT POINT TO LIFT THE BOX

To remove the box:

1. Always use the recommended eyelets,
2. Completely empty the box,
3. Close the door.

To remove it, you will need to:

1. Unscrew all the screws that attach the box to the frame,
2. Disconnect the charging port,
3. Disconnect the rear lights,
4. Disconnect the antenna if your vehicle is equipped with telemetry,
5. Unscrew the wings.

Next, using a winch, a hoist, or other systems designed to lift loads, lift the box by the eyelets.

For any further inquiries, please contact a maintenance partner.

# APPENDIX A

Failure diagnostics.

| PROBLEME                                              | POSSIBLE CAUSE                             | ACTION                                                                          |
|-------------------------------------------------------|--------------------------------------------|---------------------------------------------------------------------------------|
| A TIRE IS FLAT                                        | Pinch of the inner tube or puncture.       | Replace the puncture, Follow the instructions or contact a maintenance partner. |
| A CREAKING OR SQUEAKING SOUND COMES FROM THE FRAME    | A part of the bike may be loose or broken. | Contact a maintenance partner for a repair                                      |
| A LIGHT ON THE BIKE IS NO LONGER WORKING              | The component is defective                 | Contact a maintenance partner for a replacement or repair                       |
| THE SCREEN OR THE ACCELERATOR IS NO LONGER RESPONDING | System communication problem               | Turn off the bike for 10 seconds and turn it back on                            |
|                                                       | A stop system is activated                 | Remove the brake and the emergency stop button                                  |
|                                                       | The component is defective                 | Contact a maintenance partner for a replacement or repair                       |
| THE BIKE IS NOT CHARGING                              | Battery too hot                            | Wait for the battery to cool down                                               |
|                                                       | Battery too c                              | Wait for the battery to warm up                                                 |
|                                                       | Electrical circuit fuse                    | Replace the fuse or contact a maintenance partner                               |

| PROBLEME                    | POSSIBLE CAUSE               | ACTION                                                    |
|-----------------------------|------------------------------|-----------------------------------------------------------|
| THE BIKE NO LONGER BRAKES   | Wear of the brake pads       | Contact a maintenance partner for a replacement or repair |
|                             | Hydraulic leaks              | Contact a maintenance partner for a replacement or repair |
| THE BIKE WON'T MOVE ANYMORE | Battery charge level too low | Recharge the battery                                      |
|                             | Defective electrical system  | Contact a maintenance partner for a replacement or repair |
|                             | Break in the transmission    | Contact a maintenance partner for a replacement or repair |

TABLE 14 : FAILURE DIAGNOSTIC GRID

# APPENDIX B

## Error codes

| ERROR CODE | DESCRIPTION                      | SOLUTION                                                                                                                      |
|------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>C00</b> | Overtemperature (Charging)       | Wait until the temperature returns to the normal operating range before resuming charging                                     |
| <b>C01</b> | Temperature too low (Charging)   | Wait until the temperature returns to the acceptable operating range                                                          |
| <b>C02</b> | Overcurrent (Recoverable)        | Restart the charger. Replace the charger if the problem persists through your maintenance partner                             |
| <b>C03</b> | Cell Overvoltage (Secondary)     | Discharge the battery to 20% state of charge (SOC), then recharge it through your maintenance partner                         |
| <b>C04</b> | Short Circuit                    | Check all battery system connection points. Replace the battery system if the issue persists through your maintenance partner |
| <b>C05</b> | Charging Fault (Other)           | Restart the charger and the battery. Replace the charger if the issue persists through your maintenance partner               |
| <b>C06</b> | BMS Overtemperature              | Wait until the temperature returns to the normal operating range                                                              |
| <b>C07</b> | Safety Undervoltage              | Disconnect and replace the battery through your maintenance partner.                                                          |
| <b>C08</b> | AFE Communication Fault          | Disconnect and replace the battery through your maintenance partner                                                           |
| <b>C09</b> | Hardware Overvoltage (Secondary) | Disconnect and replace the battery through your maintenance partner                                                           |

| <b>ERROR CODE</b> | <b>DESCRIPTION</b>           | <b>SOLUTION</b>                                                                                                                                                                       |
|-------------------|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>C10</b>        | N/A                          | N/A                                                                                                                                                                                   |
| <b>C11</b>        | Precharge Fault              | Restart the charger and the battery. If the problem persists, replace both through your maintenance partner                                                                           |
| <b>C12</b>        | Parallel Pack Error          | Check the connections between the batteries through your maintenance partner                                                                                                          |
| <b>C13</b>        | N/A                          | N/A                                                                                                                                                                                   |
| <b>C14</b>        | Pre-discharge Fault          | Through your maintenance partner, enable battery charging without a charger connected and verify that the fault disappears. If the fault persists, disconnect and replace the battery |
| <b>C15</b>        | Internal Communication Fault | Disconnect and replace the battery through your maintenance partner                                                                                                                   |

TABLE 15 : CHARGING ERROR CODE TABLE

## Discharging Error Codes

| <b>ERROR CODE</b> | <b>DESCRIPTION</b>                  | <b>SOLUTION</b>                                                                                                                |
|-------------------|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>D00</b>        | Overtemperature<br>(Cells)          | Wait until the temperature returns to the normal operating range before resuming operation                                     |
| <b>D01</b>        | Cell temperature too low<br>(Cells) | Wait until the temperature returns to the acceptable operating range. The battery will automatically resume normal operation   |
| <b>D02</b>        | Overcurrent<br>(Recoverable)        | The battery will automatically resume normal operation once the discharge has stopped                                          |
| <b>D03</b>        | Cell undervoltage<br>(Primary)      | Recharge the battery                                                                                                           |
| <b>D04</b>        | Short Circuit                       | Through your maintenance partner, verify all battery system connection points. Ensure the battery is compatible with the pack. |
| <b>D05</b>        | Discharge fault<br>(Other)          | Restart the battery. Replace the battery if the problem persists through your maintenance partner                              |
| <b>D06</b>        | BMS overtemperature                 | Wait until the temperature returns to the acceptable operating range                                                           |
| <b>D07</b>        | Safety undervoltage                 | Disconnect and replace the battery through your maintenance partner                                                            |
| <b>D08</b>        | AFE Communication Fault             | Disconnect and replace the battery through your maintenance partner                                                            |
| <b>D09</b>        | Hardware overvoltage<br>(Secondary) | Disconnect and replace the battery through your maintenance partner                                                            |

| <b>ERROR CODE</b> | <b>DESCRIPTION</b>           | <b>SOLUTION</b>                                                              |
|-------------------|------------------------------|------------------------------------------------------------------------------|
| <b>D10</b>        | N/A                          | N/A                                                                          |
| <b>D11</b>        | N/A                          | N/A                                                                          |
| <b>D12</b>        | Parallel Pack Error          | Check the connections between the batteries through your maintenance partner |
| <b>D13</b>        | N/A                          | N/A                                                                          |
| <b>D14</b>        | Pre-discharge Fault          | Through your maintenance partner, enable battery charging with no charger    |
| <b>D15</b>        | Internal Communication Fault | Disconnect and replace the battery through your maintenance partner          |

TABLE 16 : DISCHARGING ERROR CODE TABLE

# **APPENDIX C**

Quick Start Guide.

## **BEFORE DEPARTURE**

1. Inspect the tire pressure and the overall condition of the bike.
2. Adjust the seat and the mirrors.
3. Start the engine.
4. Check that the battery is at 100%.
5. Check that all signaling devices are functional. (Left/right turn signal, front/rear, high beams and low beams, horn, brake lights and emergency lights).
6. Check that the handbrake is not engaged or that the emergency stop button is not pressed.
7. Ensure the proper functioning of the brakes.

## **DURING USAGE**

1. Use the handbrake every time you get off the bike.
2. Accelerate gradually.
3. Use the boost mode to climb slopes.
4. Stay alert to any signs of malfunction or breakage.

## **AFTER USAGE**

1. Turn off the bike.
2. Apply the handbrake.
3. Recharge the bike.

| TIRES                         |                                                              |
|-------------------------------|--------------------------------------------------------------|
| GENERAL CONDITION             | No cuts or punctures                                         |
| INFLATION PRESSURE            | 2.75 Bar (40 Psi)                                            |
| BRAKING SYSTEM                |                                                              |
| FLUID LEVEL                   | No fluid leaks or fluid present in the cables                |
| LEVER                         | The lever does not contact the handlebar when squeezed       |
| LIGHTING                      |                                                              |
| TURN SIGNALS                  | Turn signals operate correctly (left, right, front and rear) |
| POSITION LIGHT                | Position lights operate correctly (front and rear)           |
| BRAKE LIGHT                   | Brake lights operate correctly                               |
| AUDIBLE WARNING DEVICE (HORN) | The horn operates correctly                                  |
| STRUCTURE                     |                                                              |
| FRAME                         | Le cadre n'est pas endommagé                                 |
| SADDLE                        | La selle n'est pas endommagée                                |
| PORTES                        | The doors are closed                                         |
| BRAKE LEVER                   | Brake levers are not damaged                                 |
| BATTERY                       |                                                              |
| BATTERY STATE OF CHARGE       | Verify that the green bar on the indicator shows 100%        |

TABLE 17 : PRE-DEPARTURE INSPECTION

# APPENDIX D

Torque and pressure guide

| DESCRIPTION                | LOCATION | TORQUE |
|----------------------------|----------|--------|
| BRAKE LEVER SCREW          | 1        | 8.5 Nm |
| THROTTLE LEVER SCREW       | 2        | 0.3 Nm |
| GRIP SCREW                 | 3        | 3 Nm   |
| FRONT AND REAR WHEEL NUTS  | 4        | 60 Nm  |
| FRONT AXLE BOLT            | 5        | 20 Nm  |
| CRANK ARM BOLT             | 6        | 10 Nm  |
| UPPER STEERING COLUMN BOLT | 7        | 11 Nm  |
| STEM / HANDLEBAR CLAMP     | 8        | 7 Nm   |
| STEM / FORK CLAMP          | 9        | 7 Nm   |
| PEDALS                     | 11       | 30 Nm  |
| BRAKE CALIPER              | 12       | 39 Nm  |
| TIRE PRESSURE              | 13       | 40 PSI |

TABLE 18 : TORQUES AND PRESSURE

In case of any questions, please contact a maintenance partner.

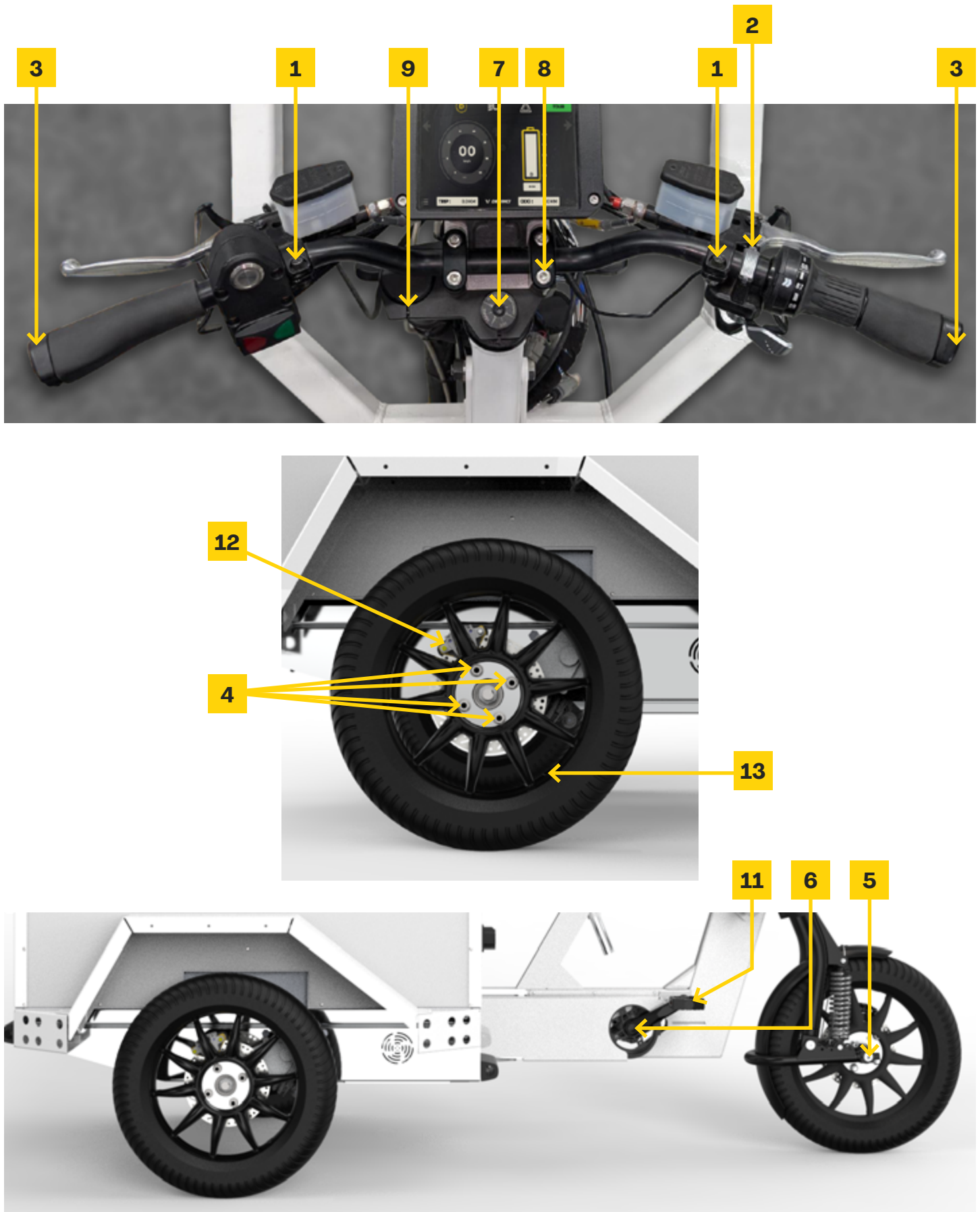


FIGURE 22 : SCREW LOCATION FOR TORQUE PROVIDED

# APPENDIX E

Multi-points inspection and periodic maintenance

| COMPONENT OR SYSTEM                | INSPECTION OR THRESHOLD VALUE                                                            |
|------------------------------------|------------------------------------------------------------------------------------------|
| HANDLEBAR CONTROLS INSPECTION      | Verify that all controls are securely fastened                                           |
| SEAT POST AND SADDLE INSPECTION    | Verify that the seat post is still adjustable and that there is no excessive play        |
| STEERING PLAY INSPECTION           | Verify that there is no excessive play in the steering system                            |
| COCKPIT ASSEMBLY INSPECTION        | Verify that there is no unwanted play at the cockpit (handlebar/stem/headset)            |
| PEDAL CONDITION INSPECTION         | Bearings are in good condition and there is no excessive wear on the pedal platform      |
| PINION GEARBOX SHIFTING INSPECTION | Smooth gear shifting                                                                     |
| STEERING HEADSET INSPECTION        | Lubricate the headset bearings                                                           |
| FRONT AND REAR WHEEL INSPECTION    | No significant play and no abnormal friction when rotating the wheels                    |
| BRAKE HOSE INSPECTION              | No excessive wear or cuts on the brake hoses                                             |
| BRAKE DISC INSPECTION              | Minimum thickness: 5.5 mm                                                                |
| BRAKE PAD INSPECTION               | Minimum total pad thickness: 5.3 mm, measured at the outermost visible point of the pads |
| PARKING BRAKE INSPECTION           | Verify proper operation                                                                  |
| BRAKE FLUID LEVEL INSPECTION       | Ensure the fluid is at the proper level                                                  |
| CRANK INSPECTION                   | Refer to the torque specification table                                                  |

TABLE 19 : MULTIPPOINTS INSPECTION

| COMPONENT OR SYSTEM                             | INSPECTION OR THRESHOLD VALUE                                                                                     |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>TIRE INSPECTION</b>                          | No excessive wear                                                                                                 |
| <b>SUSPENSION INSPECTION</b>                    | Verify the condition of the shock absorbers (no excessive oil leakage) and the condition of the bump stops        |
| <b>MOTOR AND BELT CONDITION INSPECTION</b>      | No excessive wear; belt tension according to the owner's manual                                                   |
| <b>PEDAL SYSTEM AND BELT TENSION INSPECTION</b> | No excessive wear; belt tension according to the owner's manual                                                   |
| <b>GEARBOX ACCESS COVER INSPECTION</b>          | Smooth opening and closing                                                                                        |
| <b>LIGHTING INSPECTION</b>                      | Proper operation of low beam, high beam, turn signals, position lights, and brake light                           |
| <b>MIRROR INSPECTION</b>                        | Functional integrity                                                                                              |
| <b>WINDSHIELD INSPECTION</b>                    | Functional integrity                                                                                              |
| <b>FENDER AND PROTECTIVE GUARDS INSPECTION</b>  | Functional integrity (front and rear fenders, chain/belt guard, front fairing protector)                          |
| <b>ELECTRICAL FUNCTIONS VERIFICATION</b>        | Drive mode, reverse, hazard lights, horn, power button, throttle, brake switch, left and right turn signals, horn |
| <b>WHEEL BEARING INSPECTION</b>                 | Bearings rotate smoothly with no play or excessive vibration                                                      |
| <b>INTERMEDIATE SHAFT BEARING INSPECTION</b>    | Bearings rotate smoothly with no play or excessive vibration                                                      |
| <b>BATTERY COOLING FAN INSPECTION</b>           | Verify that the fans are unobstructed and operating correctly                                                     |
| <b>J1772 CHARGING CONNECTOR INSPECTION</b>      | Verify that there is no debris or corrosion                                                                       |

| TARGETED COMPONENTS OR SYSTEM         | 6 MONTHS / 5000 KM | 12 MONTHS / 10000 KM | 18 MONTHS / 15000 KM | 24 MONTHS / 20000 KM | 30 MONTHS / 25000 KM | 36 MONTHS / 30000 KM | 42 MONTHS / 35000 KM | 48 MONTHS / 40000 KM | 54 MONTHS / 45000 KM | 60 MONTHS / 50000 KM |
|---------------------------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| MULTI-POINT INSPECTION                | X                  | X                    | X                    | X                    | X                    | X                    | X                    | X                    | X                    | X                    |
| HEADSET MAINTENANCE                   |                    |                      | X                    |                      |                      | X                    |                      |                      | X                    |                      |
| OIL CHANGE IN THE SUSPENSION CASINGS  |                    |                      |                      | X                    |                      |                      |                      | X                    |                      |                      |
| OIL CHANGE IN THE ENGINE REDUCER      |                    |                      |                      |                      |                      |                      |                      |                      |                      | X                    |
| OIL CHANGE IN THE PINION GEAR HOUSING |                    | X                    |                      | X                    |                      | X                    |                      | X                    |                      | X                    |
| CHANGE OF PINION BELT                 |                    |                      |                      | X                    |                      |                      |                      | X                    |                      |                      |
| CHANGE OF THE PINION BELT GEARS       |                    |                      |                      |                      |                      |                      |                      | X                    |                      |                      |
| CHANGE OF MOTOR BELT                  |                    |                      |                      |                      |                      |                      |                      |                      |                      | X                    |

TABLE 20 : PERIODIC MAINTENANCE

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