FUELL Inc.
244 Fifth Avenue, Suite A209, New York, NY 10001, USA

E-Mail: fuell@fuell.us · www.fuell.us

2021 06 006

FUELL

Owner's Manual *Flluid 1 - Flluid 1S - Flluid 1E*

Be sure to read this manual carefully to familiarize yourself with your Flluid. The expert treatment, in addition to the regular care and maintenance of the Flluid serves to maintain its value.

Cycling, riding your Flluid, and other similar activities carry a risk of injury or death. Please read these instructions and comply with all regulations regarding the use of your Flluid in your jurisdiction.

For reasons of safety, please also pay attention to the information about modifications, accessories and spare parts.

Provide these operating instructions when selling your Flluid to a new owner.

FUELL is constantly working on the further development of all models. Please understand that changes to the scope of delivery in terms of shape, equipment and technology are therefore possible at any time. Therefore no claims can be derived from the information, illustrations and descriptions of these operating instructions.

All texts, illustrations and instructions of this manual are to be found on the information applicable at the time of printing. The information contained in this manual is valid on the printing date. Updates and omissions are possible.

FUELL Inc.

Safety symbols and notes

Please note:

WARNING
Precautions to protect against potential accident, injury or death.

CAUTION
Important information and precautions that prevent damage to the vehicle. Failure to follow these precausions may lead to a warranty exclusion.

NOTE
Special notes for better handling during operation, checking and adjustment processes as well as care work.

An introduction to electric bicycles

What does the term Pedelec, S-Pedelec mean and what is the difference between them? In this section we explain the different versions of the Flluid.

PEDELECS - with pedal assistance

The Flluid- 1 is a Class 1 Pedelec (Pedal Electric Cycle) supporting the rider with an electric motor with an output up to 500 watts but only while the rider is also pedaling. The motor will assist up to a maximum speed of 20 mph. The bike can be ridden faster via the rider pedaling, but the motor will not assist at speeds in excess of 20 mph. The degree of assistance can be set in several stages and depends on the pedal force and the rider's pedaling frequency.

The definition of a pedelec follows from the US Code of Federal Regulations Title 16 Chapter II Subchapter C Part 1512. On a Federal level it is classified a bicycle. However, many states have additional laws governing the use of E-Bikes, helmet and age requirements, as well as restrictions on where they can be operated. Be sure to check your local laws before operating your E-Bike.

SPEED-PEDELECS - with pedal assistance

The Flluid- 1S and 1E are Class 3 Pedelecs (Pedal Electric Cycles) supporting the rider with an electric motor with an output up to 500 watts but only while the rider is also pedaling. The motor will assist up to a maximum speed of 28 mph. The bike can be ridden faster via the rider pedaling, but the motor will not assist at speeds in excess of 28 mph. The degree of assistance can be set in several stages and depends on the pedal force or the rider's pedaling frequency.

On a US Federal level the Flluid 1S is still classified a bicycle, however, state laws governing Class 3 Pedelecs vary even more widely including some states requiring riders have a valid license. Be sure to check your local laws before operating your E-Bike.

E-BIKES - with throttle (twist and go)
Class 2 E-bikes are similar to Class 1, however, they also include a throttle that enables the bike to operate at speeds up to 20 mph without the rider pedaling.

At this time FUELL Inc. does not offer a Class 2 E-Bike.

USING YOUR FLLUID

RIDING

CARE

MAINTENANCE

TECHNICAL SPECIFICATIONS

WARRANTY AND SERVICE

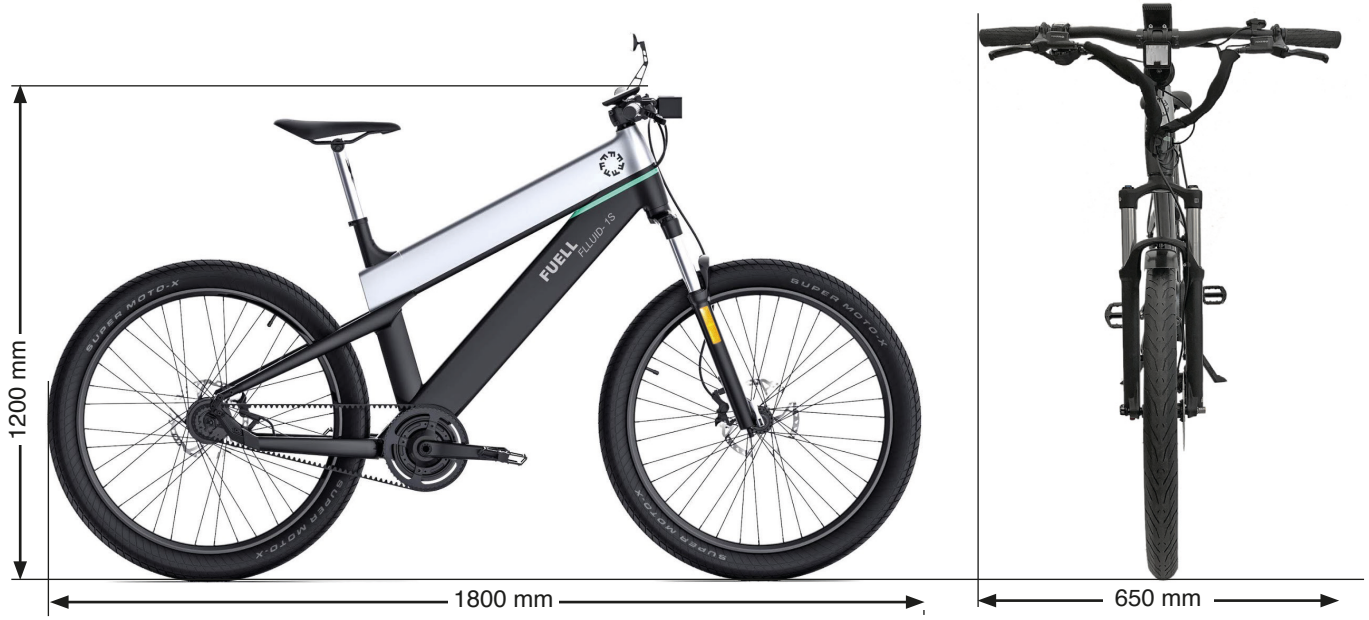
Right Side View

1. Quick Release Seat Adjustment Lever
2. Display
3. Rearview Mirror
4. Hand Controls
5. Front Suspension Adjustment
6. Pedal, Right
7. Stand
8. Drive Belt
9. Geared Hub
10. License Plate
11. Tail Light / Brake Light

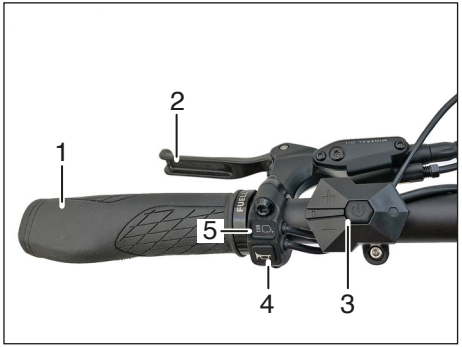
Left Side View

12 Horn
13 Headlight
14 Battery Lock, Upper
15 Battery
16 Battery Lock, Lower
17 Battery
18 Rear Brake
19 Pedal, Left
20 Drive Motor
21 Front Brake
22 Reflectors

Vehicle Dimensions

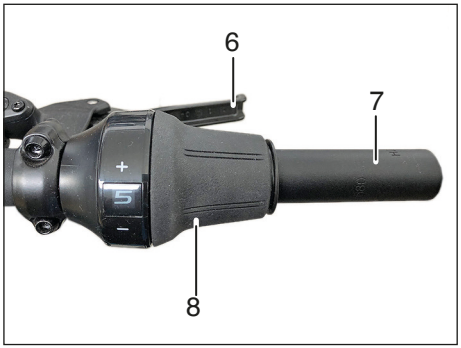


Function and SERVICE Handlebar Controls



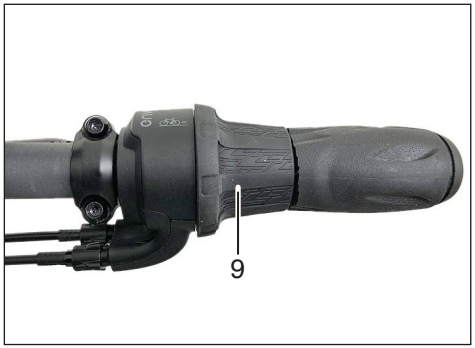
Handlebar Controls, Left

1 Fixed Grip
2 Front Brake Lever
3 Panel
4 High/Low Beam Button
5 Horn Button



Handlebar Controls, Right - FIluid-1, 1S

6 Rear Brake Lever
7 Fixed Grip
8 5-level shifting twist grip



Handlebar Controls, Right - FIluid-1E

9 Continuous shifting twist grip

Display - Introduction

Product Name

- TFT-LCD-Display
- Model: APT TFT 850C 3

Specifications

Electrical Specifications

- IPS- Screen 3.2 Inches
- Input Voltage 24 V / 36 V / 48 V
- Nominal Operating Current: 40 mA
- Max Operating Current: 100 mA
- USB Charging Port: 5 V, 500 mA
- Operating Temperature:-20°- +70 °C
- Storage Temperature -30° - +80°C

Material / Dimensions

Material and Dimensions

- Housing; ABS
- Screen: High Strength Acrylic
- Dimensions:
  Display Housing 92 mm (L) x 60 mm (W) x 14 mm (H)

Display Features

Features

- Suitable for low temperatures down to -20 °C/ -4 °F.
- High-Contrast 3.2 inch color IPS matrix display.
- Ergonomically shaped user interface points, user-friendly
- Speed Display: Current Speed, Max Speed, Average Speed

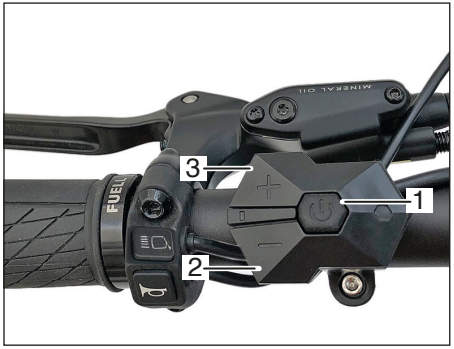
  Metric or Imperial Units: Units are user selectable
- **Smart Battery Indicator:** Accurate state of charge
- 5 Levels of Assist:

Assist Level	Power Assist %
1	50%
2	80%
3	150%
4	210%
5	300%

- Mileage Indicator:: Odometer / Trip-meter / Clock / Ride Timer
- Power Display: Real time Power Indicator, digital or analog
- Speed limit value indicator
- Error code indicator
- Light sensor
- USB charging port: 5 V / 500 mA

Display Functions

Powering the display



To Switch On and Off

1. **ON / OFF Button**
2. **DOWN / - Button**
3. **UP / + Button**

Press and hold button (1) for 1.5 seconds to turn the display and the drive system on or off.

The display will auto shut off after 5 minutes of inactivity. This setting can be adjusted in the display menu.

NOTE

Head light and tail light turn on automatically when display is powered on.

Driving with Motor Assistance

Briefly press the keys DOWN/- (2) or UP/+ (3) to change the assist level. The strongest assist is available at level 5; at level 0 there is no rider assist.

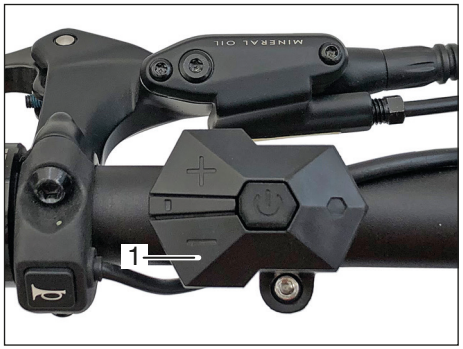
Switch Between Speed and Distance Modes

Briefly press the ON / OFF button (1) to switch between speed and distance mode:

Trip →Odometer →Range (not available on Flluid) →Trip
Time →Max Speed →Average Speed

If there is no input for 5 seconds, the display automatically returns to "speed"

Push Assist 3.5 mph (6 kmh)



CAUTION

If riding conditions exceed the rider's ability, eg. For example, on steep slopes or difficult terrain, the push assist can be used if the rider is not seated on the e-bike.

NOTE

The push assist switches off if the speed exceeds 3.5mph.

To engage the push assist press and hold the **DOWN** / - button (1).

- Press DOWN / - (1) until the push assist symbol P (2) appears on the display.

- To disengage the push assist release the DOWN / - button (1).

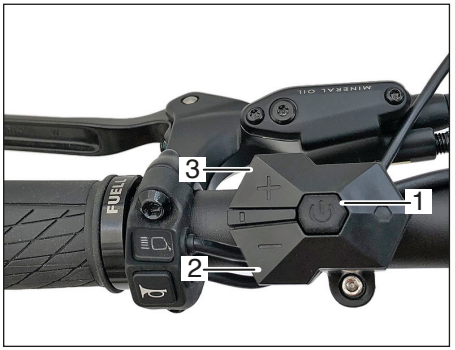
Data Reset

Press and hold the UP and DOWN buttons for one second to clear various temporarily stored data:

AVERAGE SPEED/ MAX SPEED/ TRIP/ TIME.

Temporary data is stored in memory and will not be lost when the display is powered off.

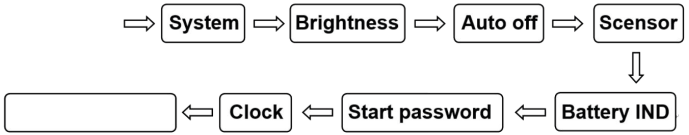
Setting up your Display



Press the power button (1) in quick succession twice (within 0.3 seconds) to access the setup menus. Use the UP / DOWN (2/3) buttons to change the parameter setting and to move to the next parameter. Press the power button (1) twice, to exit the menu.

- The display closes the menu automatically if no operation is performed for 30 seconds.
- For safety reasons, the menu can not be acceseed while riding.
- The menu automatically closes if the bike starts moving.

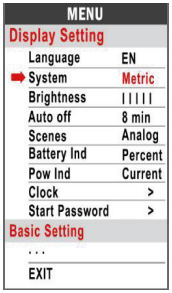
The parameters are displayed in the following order:

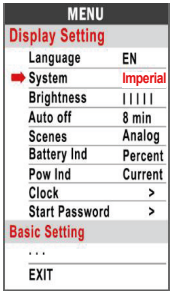


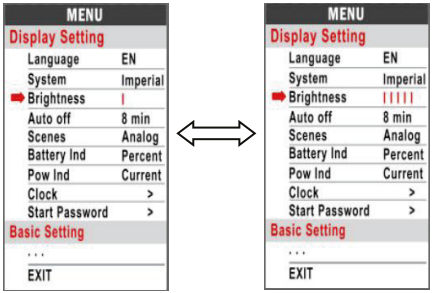
Setting up your Display

System: System: Press the UP or DOWN key to toggle between metric and English units.

Brightness: Press the UP or DOWN button to adjust the brightness of the backlight. I is the darkest, IIIII the brightest.



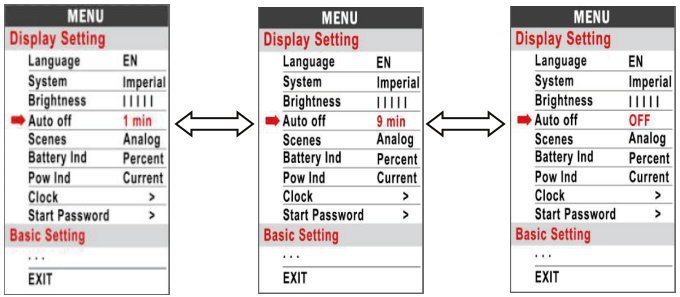


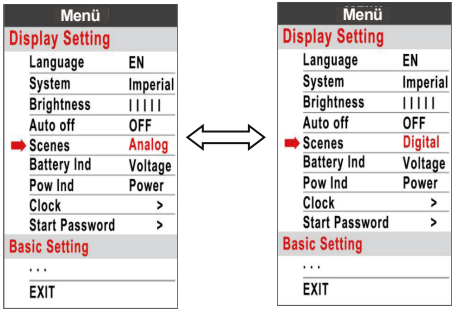


Setting up your Display

Automatic Shutoff: Press the UP or DOWN key to set the idle time until automatic shutoff. You can choose between 1 to 9 minutes to switch off or off. When set to OFF, the automatic shutdown is disabled. The default is 5 minutes.

Scenes: Analog Only (Default)





Setting up your Display

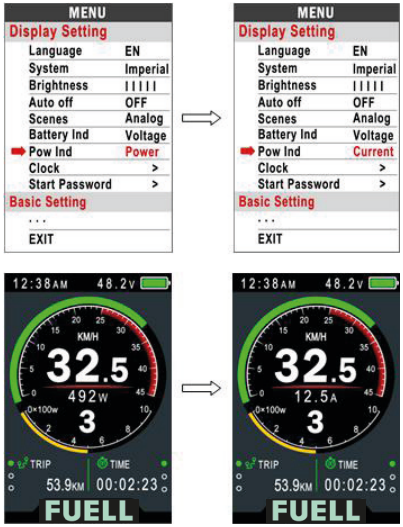
Battery Indicator: Use the UP or DOWN button to change the battery indicator: Voltage / Percent / Off.

- For an exact percentage, communication with the battery is required.

Voltage Percent OFF

Power Display: With the up or down key you can change the power display: voltage / current.

- These data refer to the power output of the battery (not the engine).



Setting up your Display

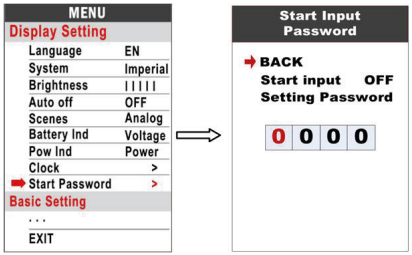
Clock: To set the clock, use the power button to call up the clock menu.
Use the UP and DOWN buttons to set Year / Month / Day / Hour / Minute / Second.

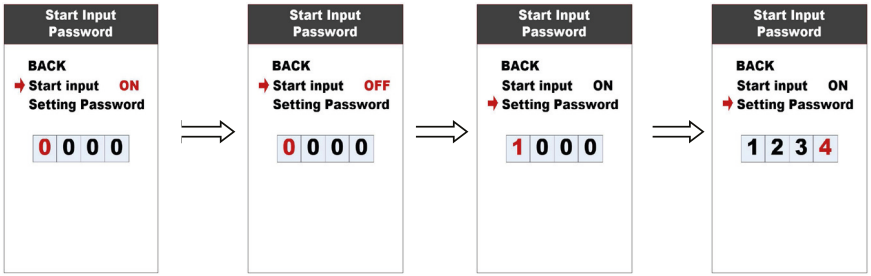
NOTE: Inside the device is a battery to power the clock even when the bike is turned off. The battery is charged when the display is on (while riding). If the battery is discharged after a long period without use (for example, after winter or during transport), the battery must be recharged as follows:
Settings menu: Auto off -> OFF (so the display can not turn off automatically)
Leave the display on for 72 hours; the battery will be charged.

Setting up your Display

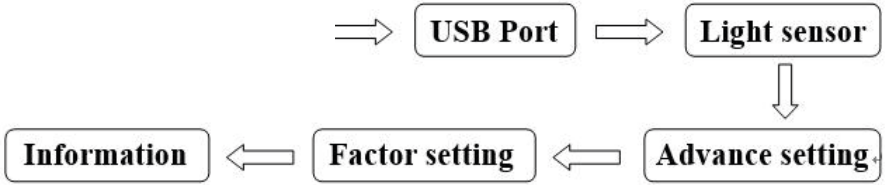
Power On: Press the power key to enter the password menu. If the option "Start input" ON you must enter the password that you have previously set when switching on.

You will need to enter the password within 30 seconds when turning it on. If the password is wrong, the display switches off automatically.



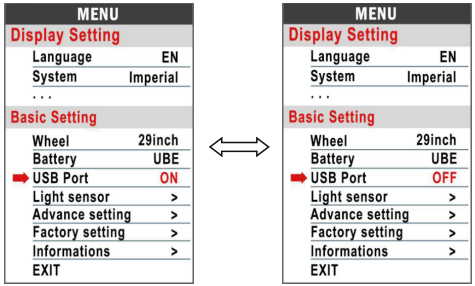


Basic Settings



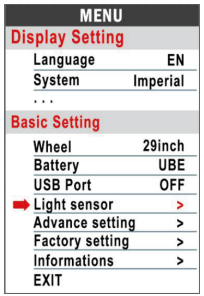
Basic Settings

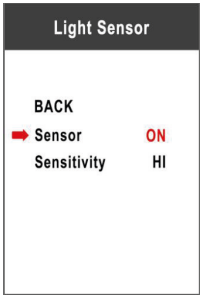
USB-Port: Use the **UP / DOWN** buttons to select **OFF / ON.** When switched off, no voltage or current is output.

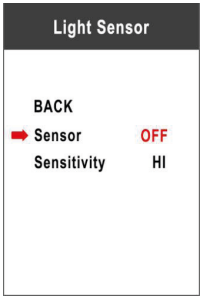


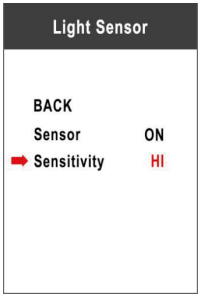
Basic Settings

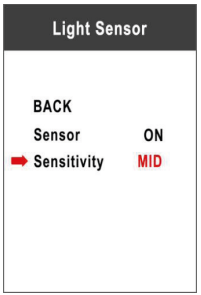
Light Sensor: Select the menu item Light sensor and press the switches to call up the light sensor interface. Use the **UP / DOWN** buttons to select **OFF or ON**;
With **UP / DOWN** you can adjust the sensitivity in three levels: **HI / MID / LO.**

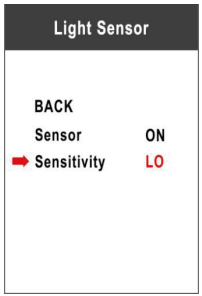










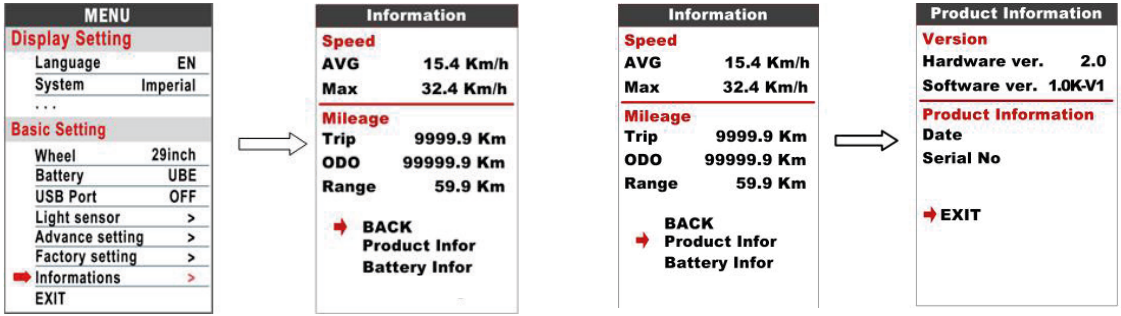


Information

Information: Information about the e-bike can be displayed here.

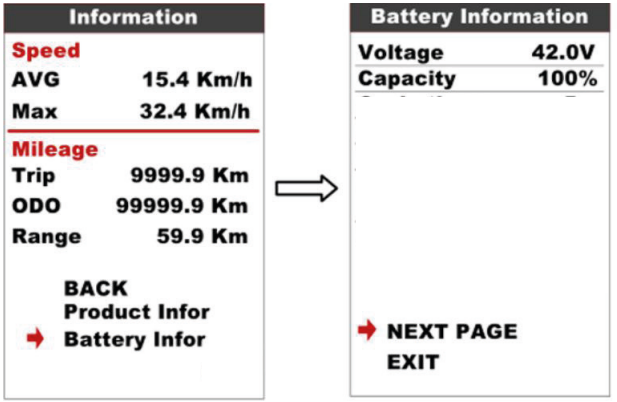
Product Info

Product Info: This menu item displays the hardware and software versions.



Battery Info

Battery Info: Under this menu item all battery information can be viewed: Voltage, Capacity, Charge Cycles, Condition, Battery Temperature, Residual Capacity, Full Charge Capacity, Initial Capacity, Max. Charge Time.



This information is only accurate when your battery is turned on.

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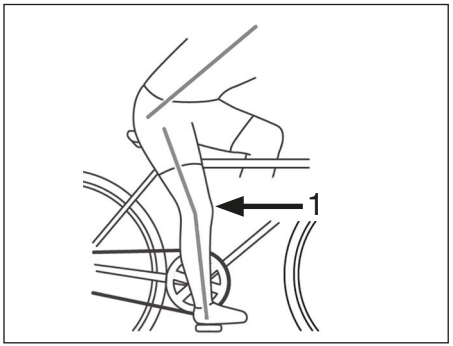
Error Code Definition

The model 850C can display warning notice. The symbol ⚠ is displayed along with the error code at the bottom of the screen. The table below explains the error codes 01 to 30.

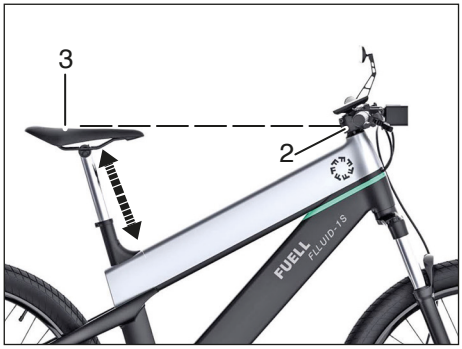
Error Code	Error Description	Resolution
01	Communication Error	Check the cables and connections
21	Current Protection	Check Controller
22	Throttle Error	Not Applicable
23	Three-Phase Power Error	Check Three-Phase Power Line Connection
24	Hall Sensor Error	Check the Hall Sensor Connection
25	Brake Error	Check the Brake Connection
26	Controller Error	Check battery voltage, check controller
27	Speed Sensor Error	Realign Speed Sensor and magnet
28	Torque Sensor Error	Check the Torque Sensor
30	Electrical Error	Re-establish communication between dash and controller

Seating Position



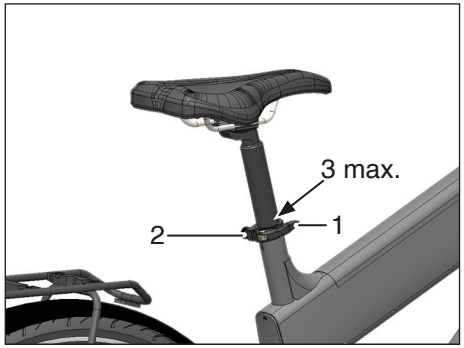
In order to enable a comfortable, fatigue-free and safe driving, the saddle and handlebar height must be adapted to the size of the rider.

The saddle height is correct when sitting with the leg not fully extended (1), the heel resting on the pedal in the lowest position. The tiptoes must still touch the ground.



The handlebar height is correct when the handlebar stem (2) with the upper edge of the saddle (3) is level or slightly higher.

Seat Height Adjustment



- Release quick release lever (1), adjust seat height and tighten lock.
- By adjusting the nut (2) on the quick release lever, the clamping force can be adjusted.

The quick release lever (1) must be able to close with a noticeable back pressure.

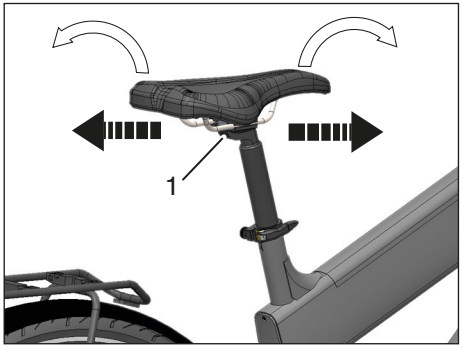
⚠ **WARNING**

Not completely closing the quick release lever (1) can result in the clamp opening. This can cause the saddle to move down while driving. This can lead to serious injury.

If properly tensioned the flip of the quick-release lever should be heavy enough that it requires the palm of your hand to close.

Never raise seat higher than the marking on the post (3).

Seat Adjustment



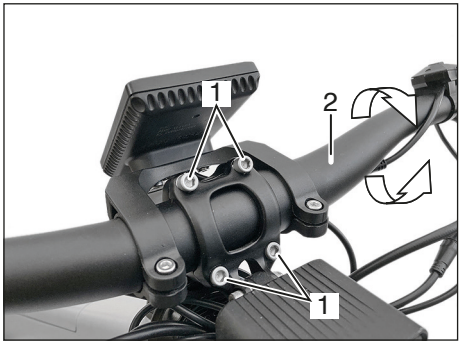
The saddle can also be tilted and adjusted in the longitudinal direction.

- Loosen the screw (1).
- Set the saddle in the desired horizontal position or move it forwards or backwards and tighten the screw (1)

NOTE

To avoid seat discomfort, the saddle should be adjusted as level as possible.

Handlebar Adjustment

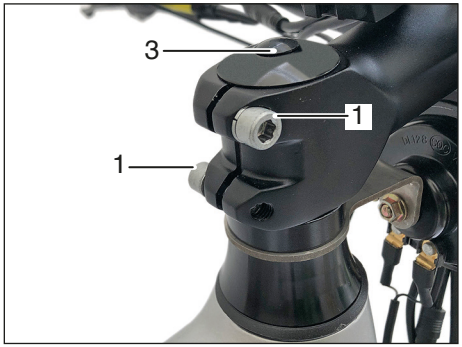


- Loosen the 4 Allen screws (1) of the handlebar clamp with a 4 mm Allen key.
- Determine the handlebar position and tighten the handlebar (2) with the hexagon socket screws (1).

NOTE

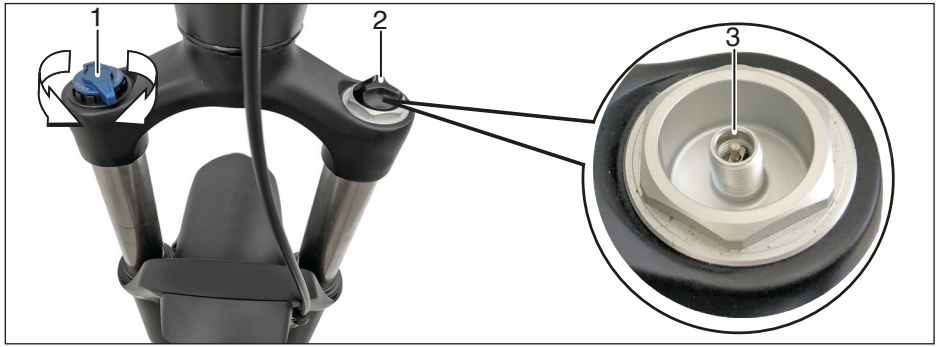
Ensure tension-free routing of the cables and avoid extreme adjustment of the handlebars upwards or downwards.

Align handlebar stem with handlebar



Align the stem with the handlebar and tighten the two Allen screws (1) to 7-9 Nm with the 5 mm Allen key.
Tighten the cap on the hexagon socket screw (3) with a 5 mm hex wrench to a torque of 3-4 Nm.
Check setting of the stearing head bearing, adjust if necessary by loosening the screws (1) and adjusting the screw (3).

Front Suspension Adjustment



Fork Lock

- The lever (1) locks the suspension.
- To lock the front suspension rotate the lever (1) toward **LOCK**.

Preload Adjustment

1. Unscrew the valve cap (2). Screw a fork / damper pump onto the valve (3).
2. Inflate the fork to the desired pressure. Never exceed the recommended maximum air pressure. Stick to the table below.
3. Seated in the normal riding position on the bike check the "sag". Add or remove air as needed. You can lean against a wall to sit with feet on the pedals to set the "sag".

Recommended air pressure psi / bar XCR-air		
Rider Weight Pounds	psi	bar
<120	40-55	2,7-3,8
120-145	55-65	3,8-4,5
145-165	65-75	4,5-5,2
165-190	75-85	5,2-5,9
190-210	85-100	5,9-6,8
210>	100+	6,8+
Factory settting	100	6,8
Max. Pressure	160	11

Important Safety Note for the Charger

Before using the charger, please read this safety note.

⚠ **WARNING**

Keep out of reach of children. To prevent risk of injury, only charge Fuell Inc. Lithium Ion (Li-Ion) batteries. Use of the charger with other batteries may result in fire or explosion which can lead to personal injury and material damage.

The use of accessories or rechargeable batteries not sold or recommended by Fuell Inc. may result in fire, electric shock or injury.

Avoid operating the charger in humid or wet conditions.

Avoid water ingress into the unit. If any liquid does enter: Immediately disconnect the charger from the wall outlet and take it to a service center for inspection. Make sure the charger is secure on a level surface.

Unplug the charger when not in use.

Do not pull on the cable to avoid cable damage and thus the risk of electric shock.
Make sure that the power cord is rolled up or folded after use.

Do not operate the charger with a damaged cable or plug. Ensure immediate replacement by a specialist.

Do not operate the charger after it has been struck, dropped or otherwise damaged.

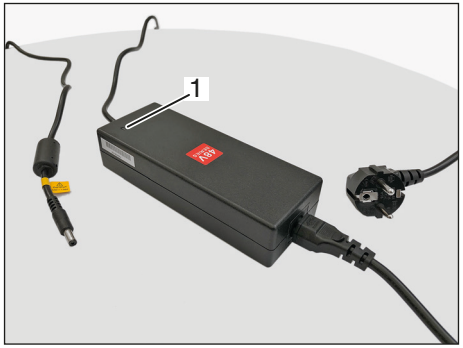
Do not disassemble the charger yourself. Incorrect service may result in electric shock or fire.

To prevent electric shock, unplug the charger before cleaning it.

The device should only be cleaned with a dry rag or a cloth. Never use oil, water or solvents.
An extension cord should only be used if absolutely necessary. The use of extension cords that are damaged may result in fire or electric shock.

If an extension cable needs to be used:
- **The number, size and shape of pins exactly matches that of the charger**
- **The extension cord is correctly wired and in good electrical condition.**
- **The cable cross-section is large enough for the current rating of the charger.**
- **The extension cord shows no visible damage.**
- **When using cable drums, the drum is fully unwound.**

Charger Function



This charger is suitable for Li-Ion batteries. The LED (1) on the charger keeps you constantly informed of the operating status. You will be informed about the status and charging of the battery at a glance.

Charging cycle and LED indicators for Li-ion battery	
LED	**MODUS**
Green	Battery not yet connected
Red	Charging
Green	Charging complete

Disorders

Please check:

- Is the power cable connected correctly?
- Are the contacts of the charger and the battery clean and not damaged or bent?
- Is the battery damaged or defective?

If the battery does not charge:

- Check whether the outlet charger is plugged into has power. If not plug into a different outlet.
- Check if all connectors are fully seated.
- If charging is still not possible, please have the battery and charger checked by your nearest service center.

Important Safety Note for the Battery

IMPORTANT NOTE:

Read before operating.

CAUTION we strongly recommend:

- The vehicle's batteries are 50% charged when delivered.
- The battery must be charged up to 24 hours for the initial charge
- The battery develops its max. power after approx. five discharge / charge cycles.

CAUTION

- **The vehicle's batteries and the charger are matched. Never charge the batteries with another charger.**
- Protect the battery from hard impacts and moisture
- Before plugging in you charger, check to be sure the outlet voltage falls within the range called out on the label of the charger.
- Under heavy use, the batteries heats up. Before charging after heavy use, please check the battery is at room temperature or let it cool down for approx. 30 minutes.

WARNING

- **Keep out of reach of children.**
- **Never open or disassemble the battery yourself.**
- **Do not cause a short circuit due to metallic objects on the rechargeable battery.**
- **Do not immerse in any liquids.**
- **Never dispose of battery by burning. There is a danger of explosion!!**

NOTE

A rechargeable battery must be recycled properly. It contains toxic heavy metals and is therefore subject to special waste treatment.

Dispose of at your local recycling center.

Important Battery Safety NOTE

FIRE HAZARD

Improper use of the battery may result in a fire hazard.

The lithium-ion battery may be damaged by improper handling. It is therefore important to take precautions when dealing with the battery.

Improper repair or service of the battery may result in a fire hazard.

Use of incorrect or damaged charger may result in a battery-external short-circuit.

If the battery is exposed to strong external heat, a battery-internal short-circuit could result.

External impacts, such as a fall or dropping of the battery, can make the battery prone to failure.

Do not charge batteries in the vicinity of flammable materials. Do not charge the battery overnight when it is completely unattended.

A smoke detector should be present where the battery is charged. If a battery fire does occur, do not attempt to extinguish it with water. Use a class ABC dry chemical fire extinguisher or smother it with sand.

Do not store in cold rooms

In general, it is also advisable not to store batteries in rooms with a temperature below freezing for a long period of time. If you park your pedelec in the non-heated garage for a long period in winter, store the batteries separately in a heated room.
Whenever the pedelec will not be used for a long period of time, the battery should be stored in a dry and cool place with 30 to 60 percent charging capacity.

Caution is also required for deeply discharged batteries that have not been used for a long time. Do not charge a battery when it is bulged. The same applies to batteries that have fallen or otherwise damaged. Physical damage can significantly increase the risk of explosion.

Damaged / defective / deeply discharged batteries may heat up as a result of chemical reactions and may cause a fire hazard.

Store such batteries in fireproof dry containers or rooms until disposal.

FUELL Inc disclaims any liability for such batteries in the event of improper storage.

Handling of the Battery and Charger

To achieve the longest possible battery life, the following notes must be observed:

- If the battery temperature is below 0°C (32°F) and above + 60°C (140°F), the charger will not become active. Bring the battery to room temperature before charging.
- The charger is a microcomputer-controlled system with many monitoring and control functions. Among other things, this device turns off when the battery is fully charged.

These systems are designed so that the battery cannot overcharge.

Nevertheless, we recommend that you only leave the battery on the charger if the vehicle is to be used again in the foreseeable future (several days).

- Never leave the battery connected to the charger when not in use for a long time.
- When decommissioning (for example in winter), store the battery in a dry room, preferably when charged.
- Recharge every 2 months to prevent deep discharge.
- When restarting the battery after a long period of non-use (for example, after winter shutdown), the battery should be left on the charger for about 1 day.

CAUTION

Lack of CAUTION can lead to the deep discharge of the battery.
Deep discharge of battery voids the battery warranty.

NOTE

Battery Temperatures:

Operating Temperature -4°F to + 140°F (-20°C to + 60°C)

Charge 32°F to + 113°F (0°C to + 45°C)

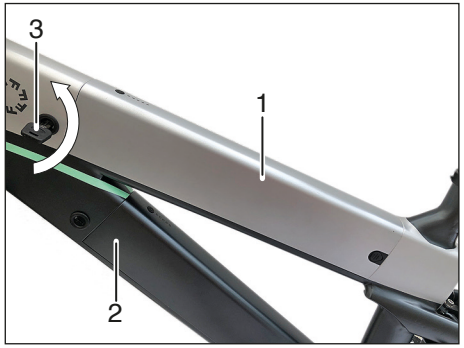
Storage 32°F to + 104°F (0°C to + 40°C)

Thermal Protection Over 158°F (70°C) cannot charge or use.

Self-discharge

Due to the chemistry in sealed battery cells, the battery pack will slowly discharge. The amount of discharge depends on the time, the state of charge and ambient conditions (temperature, humidity).
This will result in reduced range from the electric drive unless the battery is recharged before use.

Removing the Battery



NOTE

Removing the upper battery (1) or the lower battery (2).

The batteries are secured to the frame with a lock.

- Insert key (3) and while supporting the battery with your hand turn to the left.
- Swing the battery (1) outwards and remove.

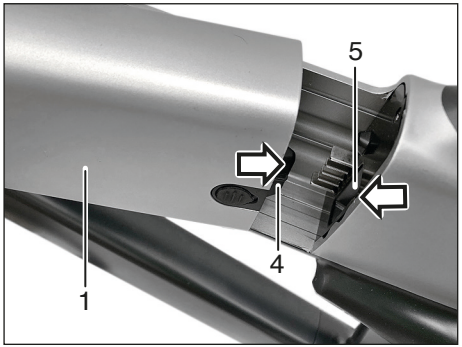
CAUTION

The battery must be fully charged every two months if not used for a long time. Failure to follow this CAUTION can lead to deep discharge of the battery. Damage caused by deeply discharging the battery is not covered under warranty.

NOTE

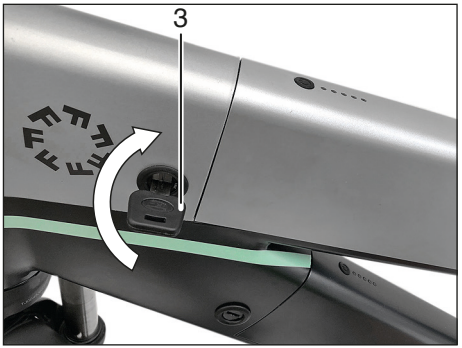
Modification of the bicycle may result in voiding your warranty. Examples of such modifications include but are not limited to alteration of the gearbox, secondary gear ratio and the attachment of accessories and spare parts, which were not released or approved by FUELL Inc. Service by a unqualified service center or failure to follow the recommended maintenance intervals may result in the loss of the warranty.

Installing the Battery



- Insert the battery (1) with the connector (4) into the receptacle (5).

- Insert the battery (1) into the frame.



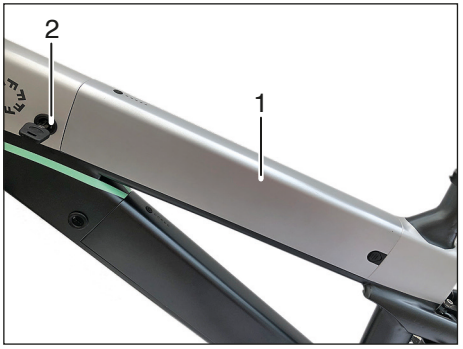
- Turn key (3) clockwise and remove.

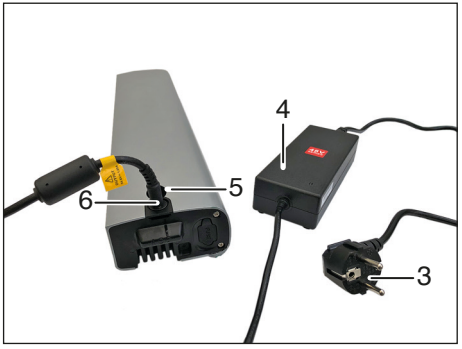
NOTE

Do not attempt to install the battery with the lock in the locked position.

Damage to both the locking mechanism and battery may occur.

Charging the Battery





NOTE

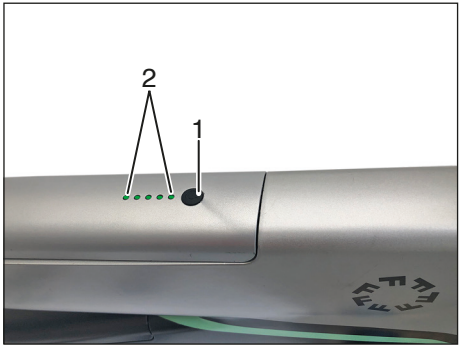
The battery (1) can be charged either installed into the Flluid or externally.

The battery is secured with a lock (2).

- Unlock the battery and remove it.

- First connect the plug (3) of the charger (4) to the wall outlet 100-230 V, 50-60 Hz.
- Open the cover (5) on the charge port.
- Connect the charging plug (6) of the charger to the battery charge port.

Battery State of Charge



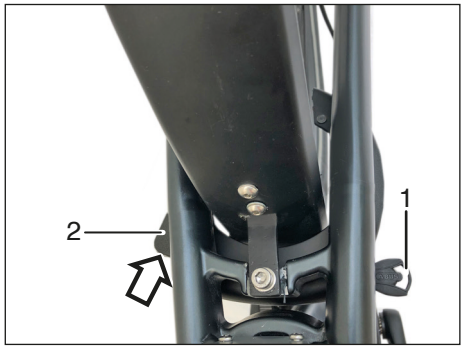
LED	■ ■ ■■ ■ Battery is 100% charged.
LED	■ ■■ ■ Battery is about 75% charged.
LED	■■ ■ Charge soon Battery is about 50% charged.
LED	■■ Charge immediately Battery is nearly discharged.

NOTE

The state of charge can also be checked with the battery removed.

- When the button (1) is pressed, the LEDs (2) will light up according to the battery charge status:

Ring lock



Secure the vehicle against unauthorized access.

To lock the Ring lock:
- Turn key (1) to the right and hold tight.
- At the same time push the lever (2) down to the stop and release the key.

The lock is locked.

NOTE
The key can be removed in this position, it cannot be removed when turned right.

To Open:
- Insert the key (1) into the lock and turn to the right.
- The lever (2) opens.

The key is not removable when the lock is open

NOTE
Note the key number by the key so that replacement can be obtained if necessary.

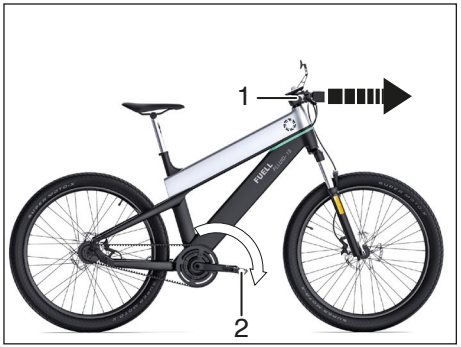
Tire Pressure

Tires can be inflated with an air compressor.

WARNING When inflating the tires with compressor air pressure equipment (eg at filling stations) caution is required. Due to the small volume of the tires the max. pressure is achieved quickly

Tire pressure front and rear max. 3.0 bar (44 psi), min. 2.0 bar (29 psi).

Start Up



⚠ **WARNING – RISK OF INJURY!**

A fall with serious injuries could be the cause if the following points are not observed:

1. **Before riding off, hold the handlebar (1) straight ahead**
2. **While getting familiar with your FIluid, ride off with pedal power only and only switch on the motor once you are moving!**
3. **Only use the pedals (2) for starting once a safe sitting and riding position has been assumed.**

Riding in pedelec operation

4. **When starting in the bend or on a tight turn, lightly apply the handbrake lever. This breaks the engine power and enables safe riding.**

All models can be operated with the auxiliary drive switched on and without.
When the auxiliary drive is activated, you can start the bike like with a normal bicycle. When you press the pedals, the electric motor is activated and the bike is accelerated. The more you push the pedals, the more the engine will assist you.

When the auxiliary drive is switched on, the motor takes over about half of the drive power up to a speed of approx. 20mph (FIluid 1) or 28pmh (FIluid 1S/1E)

From about 20 mph (FIluid-1) or about 28 mph (FIluid 1S/1E), the engine idles, FIluid is driven only by muscle power.

Range

The achievable range with one charge of the two batteries depends on a variety of factors. These include the battery and vehicle condition and especially the route profile.

Under normal conditions, the two Li-ion batteries have a combined max range of 200 km/125 miles as a pedelec (continuous pedal assisted).

NOTE

Both batteries are in operation while driving. It does not have to be switched manually to the second battery.

Remember:

- Charge the battery before every major ride and check the tire pressure
- The battery develops its max power only after about five discharge / charge cycles.
- The battery is subject to normal self-discharge.

Driving - Brakes

Hand brake lever (1) for front brake

Hand brake lever (2) for rear brake

WARNING

In tight corners, curves, grimy roads, wet asphalt and black ice should be carefully braked with the front brake so that the front wheel does not slip.
Please brake with caution. Locked wheels have a lower braking effect and can also lead to skidding and falling.
When possible brake before a curve instead of in it!!
Braking in a curve increases the risk of slipping.

NOTE

Familiarizes yourself with the brakes where you do not endanger yourself and others (eg on traffic exercise stations) so you are ready to brake effectively in an "emergency".

WARNING

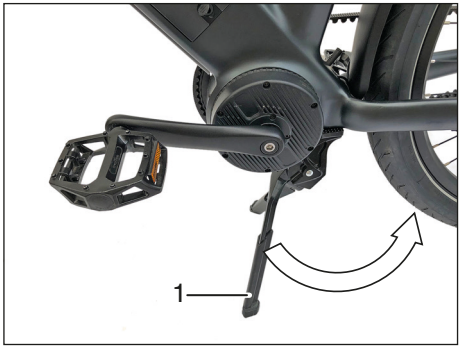
Brake fluid: clean filler cap before removing. Use only TEKTRO mineral oil flluid from a sealed container.

Parking FIluid

NOTE

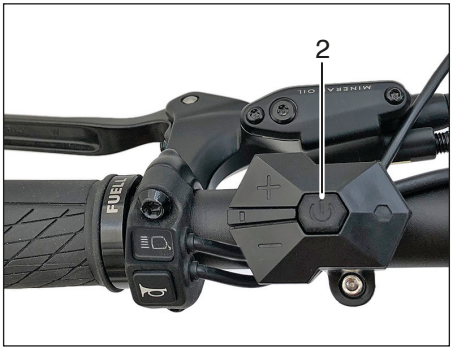
If the bicycle is in the auxiliary drive mode, the display is switched off after approx. 10 minutes of inactivity.

To reactivate the auxiliary drive, switch it on again.



CAUTION

Always ensure a firm footing and solid ground so that the vehicle can not fall over. Park the bike with the stand (1).



- Press the button (2) longer to switch off the display and the battery.

SAFETY NOTES

Road Safety

This bicycle is equipped with two independent, functional brakes, a clearly audible horn, headlight, tail light, rear reflector pedals, side reflectors for wheels and integrated reflective strips on the tire, and front and rear reflectors.

The bicycle is only suitable for riding on paved roads and maintained bicycle paths. It is not intended for use off-road, water crossings, jumping or sports events.

Keep adequate distance between your bike and other traffic. During the journey you should note that at an average speed of approx. 11 mph about 15 feet per second are covered. Please drive within your abilities.

For your own safety, do not ride with your bicycle hands-free or side by side.

Do not use head- phones while riding. Headphones or earbuds will hinder your ability to perceive the traffic around you and hear warning sounds or sirens of emergency vehicles.

Road Safety

Safe riding required the correct adjustment of saddle and handlebar height, prescribed tire pressure, sufficient tire tread and normal function of the brake the lighting and all other components.

After some time, parts "settle". It is therefore necessary to have the axle nuts, steering head bearings, handlebars, saddles, seatposts, cranks and pedals inspect by a service enter for proper tightness before riding shortly after purchase and every six months thereafter. (see chapter "Removing and installing front wheel", "Removing and installing rear wheel", "Steering bearing", Adjust handlebar, adjust saddle, saddle height, pedal and pedals for instructions).

CAUTION

For your own safety, only use expressly approved and original bicycle spare parts. These accessories and parts were specifically tested for safety, suitability and reliability for use with your Flluid.

Owner assumes any risk and liability for use of non-approved parts. In some cases this may result in a non-compliance of local laws.

Should it be necessary to replace lighting parts or reflectors, only use original spare parts.

Do not straighten damaged or bent safety-related parts, such as frame, fork, handlebar, seat post, or crankset. These should be replaced before riding. There is a risk of breakage. If your Flluid is damaged, make sure the bicycle is safe to operate and have it inspected at a qualified service center.

SAFETY NOTES

Please conduct safety checks at regular intervals including but not limited to the following:
- Is the quick release lever tight (see chapter "Adjusting the saddle")?
- Are the brakes working properly?
- Does the lighting system work?
- Is the tire air pressure correct? (see chapter "Technical data")
- Are the steering bearings and cranks in order? (see Chapter "Steering bearings" and "cranks")
- Are the wheels secure and are all spokes tight? (see Chapter "Spokes").

After a fall or accident, inspect the bike for damage before riding (frame, handlebars, rims, etc.).

If one of the above items is not in spec, do not use the bicycle until the issue is corrected. if you can not fix the issue yourself, please contact an authorized service center.

What should I be aware of when riding?
Be certain the bike is in proper operating condition before you start. Understand your own riding behavior and ability to avoid dangerous situations:

⚠ **WARNING**

Before you ride off, hold the handlebar straight.

While getting use to your FIluid ride off with pedal power only and only switch on the motor once you are moving!

- Familiarize yourself with your bike.
- Always follow the traffic rules.
- Do not use off road.
- Do not drive in the blind spot of other vehicles.
- Use proper signals to indicate you want to turn.
- Remember that the mobility of bicycles can surprise operators of other vehicles and result in them causing a hazard to the bicycle rider.
- Drive defensively and adapted to the conditions.
- Reaction time can be affected not only by alcohol but also by drugs and medications. Never ride in an impaired state
- Hold the handlebar with both hand. Only then can you respond to sudden emergencies such roadway obstacles and respond safely.
- On sandy ground, leaves and wet roads, the tires do not have as much grip as on dry asphalt. Take this into account when cornering and braking so as not to slip and fall. Also consider the longer braking distance.
- Begin braking sooner on inclines.

Many accidents happen because cyclists are not recognized in time. It is recommended to wear bright and eye-catching clothing. Make sure that you do not wear loose clothing that can be caught on the belt drive, handlebars, pedals or in the wheels. It is recommended (and in some cases required) you to always wear a helmet. Make sure your helmet complies with DOT safety standards. Wear bicycle goggles to protect your eyes.

Transporting by Car

WARNING

The bicycle may only be mounted on its wheels for transport on appropriate loading areas (cars, other transport vehicles, roof or rear carriers, trailers).
Before transporting your bike, make sure that all parts that may come loose during transport are removed.

Your Flluid can be ridden in the rain but transportation at speeds over 28mph in the rain may damage your Flluid

Carrying Loads

WARNING

- **Do not transport bulky loads.**
- **Do not cover the lighting.**
- **Do not carry a passenger.**
- **Do not attach a trailer.**

Taking loads in any shape changes the driving behavior of your Flluid. The larger the load, the more significant this change becomes. In principle, loads (shopping bags, etc.) should not be transported on the handlebars but on the luggage rack provided for this purpose.

Be sure cargo is secured so it will not fall into the spokes. Observe the permissible total load of the bicycle.

Antitheft

NOTE

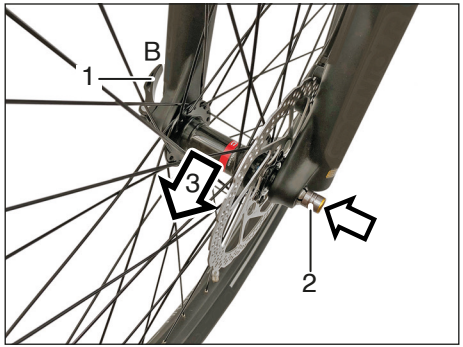
The optional GPS tracker installed in the bike not only helps with your own training protocol but also when recovering in the event of a theft.

Secure your bike against theft with an additional cable lock, and only secure it to fixed equipment such as a bicycle rack or fences post.

The ring lock should secure the frame and the rear wheel. Make sure that the lock closes tightly around the bike and the solid object the bike is secured to.

Shut off the battery or remove it.

Removing and installing front wheel for transport

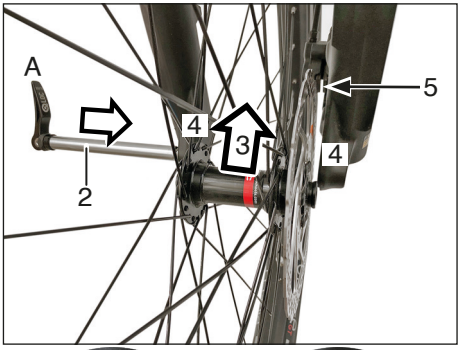


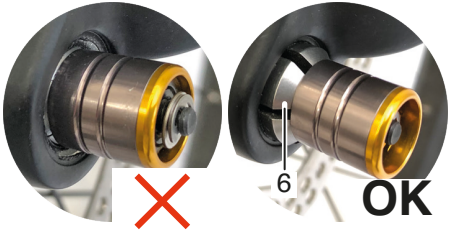
Removal:

- **Completely open the quick release lever (1) and press the quick release axle (2) through the dropouts and pull out.**
- **Remove the front wheel (3) from the fork downwards.**

⚠ WARNING

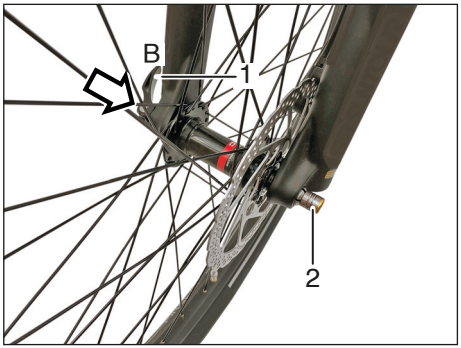
Failure to completely close the quick release lever can result in it coming open. This can lead to serious falls. The flip of the quick-release lever must be tight enough that it requires the palm of your hand for the tension to be tight enough.
Position A = OPEN
Position B = CLOSED





Install:

- Insert the front wheel (3) into the dropouts (4) of the front fork
- **Make sure that the brake pads (5) on the disc brake do not tilt.**
- Insert the thru-axle (2) until it clicks. The segment flange (6) in the front fork must be spread.



- Preload and close the quick release lever (1).
- Close quick release lever (1).
- **The quick release lever (1) must point upwards and close with a noticeable counter pressure.**

Check the function of the front wheel brake!

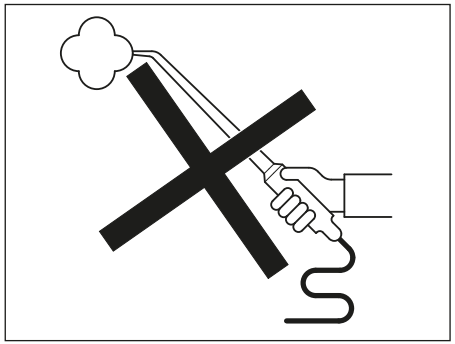
Vehicle care / care products

NOTE

Regular and expert care serves to maintain the value of the bicycle and is one of the prerequisites for the recognition of warranty claims. Corrosion due to lack of care or winter operation is not covered by the warranty.

CAUTION

Rubber and plastic parts may be damaged by aggressive or penetrating cleaning agents and solvents.

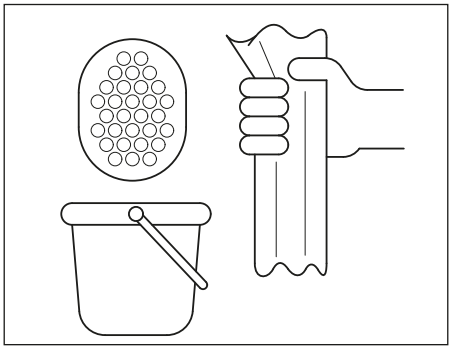


WARNING

Always carry out a brake test after cleaning or before starting your ride!

CAUTION

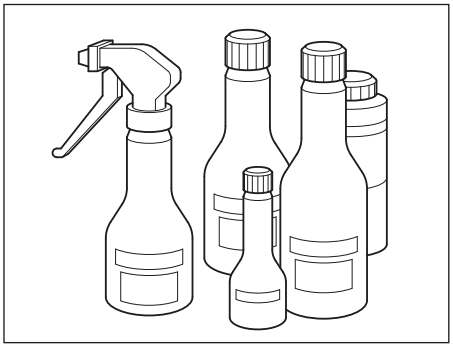
Do not use steam or high pressure water jet devices such as pressure washers! The high water pressure can lead to damage to bearing seals, battery and to the entire electrical system.



Clean

- Use only a soft sponge and clear water for washing.
- Only polish with soft cloth or leather!
- Do not wipe off dust and dirt with a dry cloth (this may result in scratches in the paint and on the panels).

Vehicle Care / Care Products



Care Products

If necessary, the bicycle should be maintained with commercially available preservatives and care products.

- As a precaution, treat corrosion-prone parts regularly, especially in winter.

CAUTION

For plastic parts, do not use silicone-containing care products and paint polishes.

- Thoroughly clean the frame and aluminum parts after long rides and preserve them with a commercially available anti-corrosion agent.

Winter operation and corrosion protection

NOTE

In the interest of environmental protection, we ask you to use care products sparingly and to use only those that are labeled as environmentally friendly.

If the bicycle is used during the winter months, road salt can result in considerable corrosion and damage.

CAUTION

Do not use warm water - increased salt action.

- Clean the bike with cold water immediately after the end of the ride.
- Dry the bike well.
- Treat parts susceptible to corrosion with wax-based anticorrosion agents before use, and repeat this several times if necessary.

Repair paint damage

Immediately repair small paint damage with a paint pen.

Tire Care

If the bike is not going to be used for a long period of time, it is advisable to park the bike so that the tires are unloaded.

Do not leave the bike or tire in a warm place such as a boiler room, for an extended period of time.

CAUTION

The tire tread thickness must not be less than 1 mm (.040”).

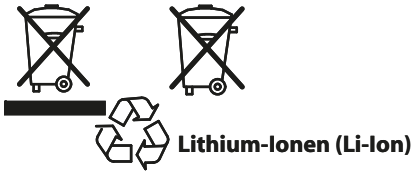
Driving on curbs, sharp-edged obstacles, ground bumps, potholes, etc. can cause damage to the rim or tire (tear of the carcass or tube) and may break spokes. Riding on under-inflated tires may also result in similar damage.

Damage from this sort of misuse is not covered by warranty.

Disposal

Electrical and electronic devices as well as batteries may not be disposed of with household waste. Consumers are required by law to return electrical and electronic equipment at the end of their service life to public collection points or to a local recycling center / authorized partner. Details of this are regulated by the relevant state law.

The symbols on the products indicate these terms:



By recycling,you make an important contribution to the protection of our environment.

Batteries are subject to disposal obligations and regulations, they contain toxic heavy metals and are therefore subject to special waste treatment. Your local recycling center can take care of the disposal.

Charger
Dispose of the device in accordance with the applicable environmental regulations in your country. Electrical waste must not be disposed of together with household waste.
Information is available from your local authority or a local workshop / authorized partner. When the end of use has been reached, dispose of the old device by pulling the mains plug out of the socket and disconnecting the power cable

Other Components
Dispose of the components in accordance with the applicable environmental regulations in your country.
Electrical waste must not be disposed of together with household waste. For advice on recycling, contact your local authority or a local workshop / authorized partner.

Technical changes, accessories and spare parts

Technical modifications to the vehicle may be in violation of federal and local laws.

If technical changes are to be made, our guidelines must be observed. This ensures that no damage to the vehicle occurs, the traffic and operational safety are maintained and the changes are permitted. An authorized service center should be used to insure such work is carried out properly.

Before purchasing accessories and before making any technical changes, consult an authorized service center.

CAUTION

For your own safety and best interest, we recommend that you use only expressly approved accessories and original replacement parts for FUELL Inc. vehicles. The safety, suitability and reliability of this equipment and these parts have been tested specifically for the vehicle.

For other accessories and parts we cannot judge the suitability for these parts to be used on our E-Bikes.

Approved accessories and original spare parts are available from FUELL directly or through an authorized service center.

Maintenance and Care

⚠ WARNING

Safety reasons prohibit repairs and adjustments outside of manufactures recommended specifications.
Improper work on safety-related parts endangers you and other road users.
This applies in particular to work on: steering, brake system and lighting.

CAUTION

Before any work on the electrical system, the battery should be removed from the vehicle, even when replacing a light bulb. do not interfere with the electronics, such actions may void your warranty.
Any work on the motor unit, the wire harness, the battery and the charger or their disassembly will void the warranty.

Please note the following:

- Maintenance work during the warranty period and thereafter without exception should be performed by a qualified service center.
- Only use original spare parts.

The maintenance plan describes the various tasks.

H = By a qualified service center
F = By the rider / owner

Maintenance and Care

H = Maintenance by an authorized service center
F = Examination by the owner/ rider

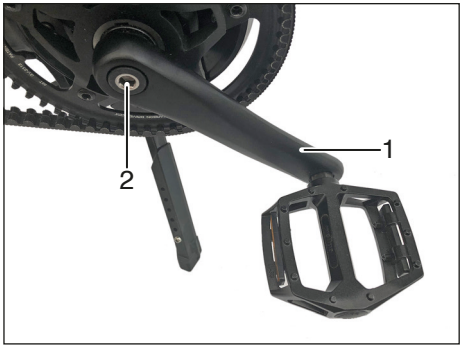
Periodic inspection and maintenance	Before Riding	Monthly	Annually	As Needed
Check all nuts and bolts, which are important for driving safety and function, for tightness, tighten if necessary. Axle nuts - Steering bearing - Handlebar - Saddle - Seatpost - Brake levers	F	F H		F H
Check drive belt tension.		F		
Tighten drive belt.		H		H
Check rear wheel track, adjust if necessary.		F H		F H
Check steering bearing.	F			F
Check steering bearing, adjust if necessary. If necessary, re-grease and adjust.		H		H
Check cables.	F			
Check and adjust cables.			H	H
Check the gear shifter, adjust if necessary.		F H		F H
Lubricate the side stand.			F H	F H
Check brake system for function.	F			F

Maintenance and Care

H = Maintenance by a car. Service Center
F = Examination by the owner/ rider

Periodic inspection and maintenance	Before Riding	Monthly	Annually	As Needed
Brakes Check for proper brake function. Visit an authorized service center if needed	F		H	H
Check rims and spokes for lateral and radial runout.	F	F		
Check rims and spokes for lateral and radial runout. Check spoke tension, adjust if necessary.		H		H
Regularly check tire air pressure.	F	F		H F
Check tire tread thickness.		F		H F
Check lighting and signal system including headlights, adjust if necessary.	F			H F
Charge the battery with the original charger.	F			F
Test drive before and after work for normal operation and traffic safety.				H

Cranks



The cranks (1) can loosen over time while driving. Check regularly if the cranks are tight. To inspect move the cranks vigorously sideways, no play should be felt.

Check the bottom bracket regularly. To do this, move the cranks back and forth sideways.

If you find that the cranks or bottom bracket are loose, visit a service center.

The cranks should be tightened to max. 40-45 Nm (30-33 ft-lb)

Follow:

- Retighten screws on (2) on both sides.

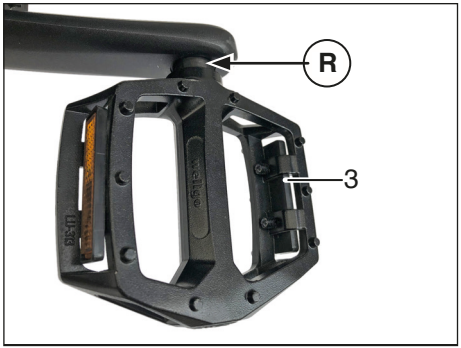
NOTE

If the cranks have already loosened, the inner square / alignment is mostly off.

The cranks are replaced, the axle must then be replaced. Disassemble the fixed crank only with a crank puller, never knock down with force.

When installing, the square bearing surfaces of the crank and axle must be completely free of grease.

Pedals



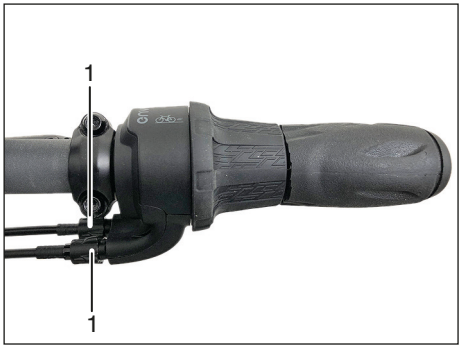
Check regularly if the pedals (3) are screwed firmly on the cranks. Note that the pedals have different threads.

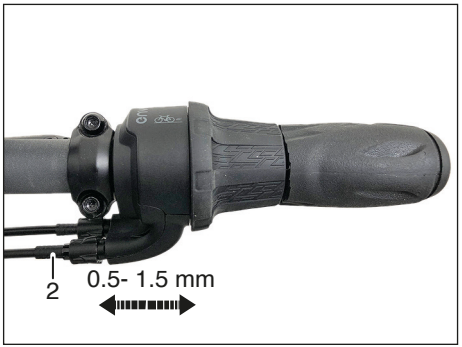
Left pedal with left-hand thread is tightened counterclockwise. Right pedal with right-hand thread is screwed clockwise.

A corresponding mark is on the pedals located near the flat area a corresponding mark: **"L" for the left side, "R" for the right side.**

Tighten the pedals with fingers first, and then tighten with a 15mm wrench.

Gear Shifting Flluid-1E (Enviolo)





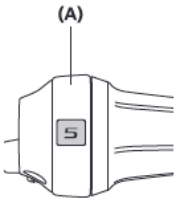
Adjusting the shift cable play
The play on the shift cable can be adjusted with the adjusting screws (1) located on the twist grip housing.

Play on the shift cable (2) can be determined by gently pulling on the outer cable sleeves in the area of the adjusting screws. A play of 0.5 mm is correct.
A shift cable play of more than 2 mm can negatively affect shift quality and reduce the service life of the shift cable.

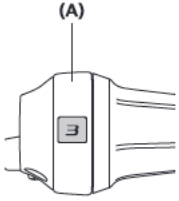
When removing and installing the rear wheel, it can be helpful to create a larger shift cable play by turning the adjusting screws, in order to make it easier to remove the shift cable ends from the manual hub interface.

Gear Shifting FIluid-1/1S (Nexus)

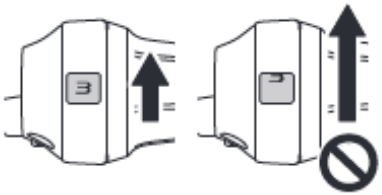
Setting of the shifting unit
5-gear hub gear



(A) Revoshift in position 5



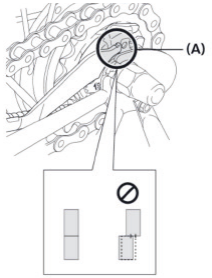
(B) Revoshift in position 3



NOTE

Adjust the shifting unit gradually, using as little force as possible to avoid over-shifting. If you twist too much, the adjustment line will not return to the correct position and the adjustment lines will not be in the right place.

(A) Yellow adjustment lines



Make sure that the yellow adjustment lines on the shift unit bracket and pulley are aligned with each other.

NOTE

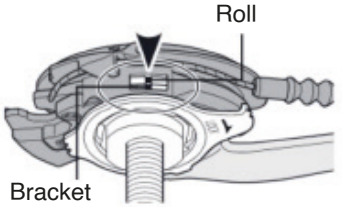
If the overlapping area is less than two thirds of the respective adjustment line, the belt may not be correctly positioned on the sprocket while pedaling, which could lead to abnormal noises or the pedals to idle.

Gear Shifting Flluid-1/1S (Nexus)

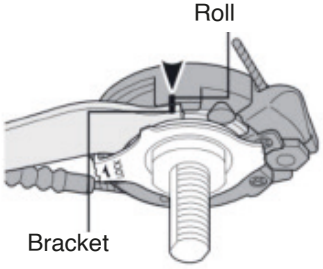
NOTE

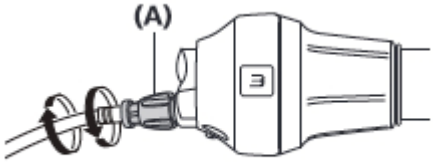
The yellow adjustment lines on the switching unit are in two places. Use the one that is easiest to see.

When the Flluid is standing:
Must be aligned



When the Flluid is upside down, on handlebar and saddle:
Must be aligned

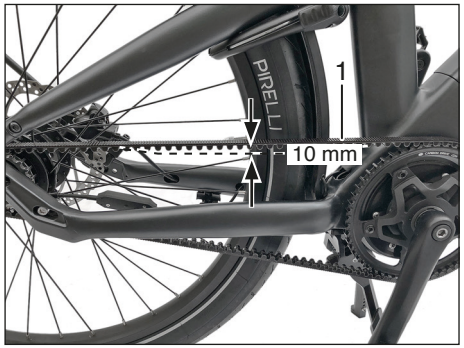




(A) Cable adjustment screw

If the adjustment lines are not aligned, turn the cable adjustment screw on the REVOSHIFT lever to align the adjustment lines.
Move the REVOSHIFT lever one more time from 3 to 5 and then back to 3.
Then make sure that the yellow adjustment lines are aligned.

Checking Drive Belt Tension



CAUTION

Have the drive belt tension inspected by an authorized service center.

Inspect

- Put FIluid on the stand
- The drive belt (1) must be able to be pressed down by approx. 10 mm.
- Use the Gates Carbon Drive mobile apps for iPhone® and Android® via their respective application marketplaces. There is also a link on the Carbon Drive Products page: https://www.gatescarbondrive.com/products/tools

Spokes

A tight fit of the spokes (1) is important for the proper running of the wheels. Spokes can loosen over time, tighten as needed.

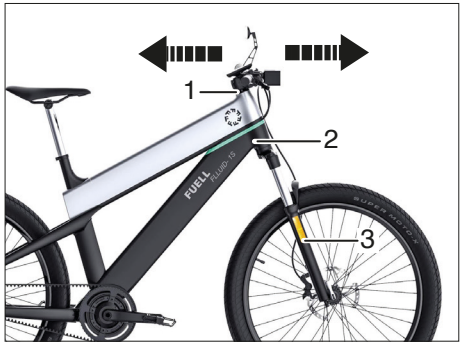
Cracked spokes and the spoke opposite the cracked spoke must be replaced immediately and re-tensioned. The wheel may need to be re-trued.

Spoke failure and an imbalance of the wheel often result from the improper tensioning of spokes.

CAUTION

Replacing, tensioning or loosening spokes is best completed by a service center.

Steering Bearing



⚠ WARNING

Pay attention to maintenance intervals.

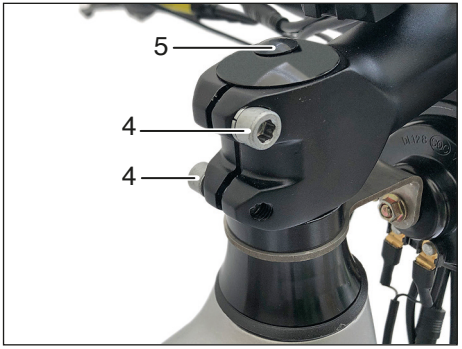
Driving for an extended time with a loose steering bearing may cause a breakage of the steering tube which can result in a fall with serious injuries.

Inspect:

- With the handbrake lever pulled, move the bike back and forth.

If play in the steering bearing (1) exists, it must be readjusted.

Steering Bearing Adjustment



To Adjust:

- **Remove the cover (5) and loosen the clamping screw underneath.**
- **Loosen the allen head screws (4).**
- **Adjust the steering bearing by adjusting the clamping screw and tighten the allen head screws (4).**

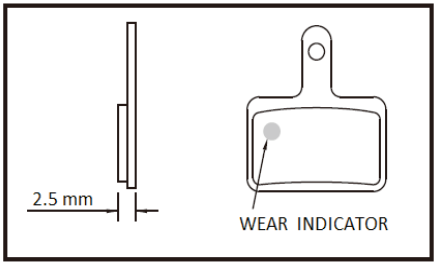
NOTE

The front fork (4) must not jam when steering and must swivel slightly in both directions.

CAUTION

Have this checked at an authorized service center.

Brake Inspection and Service



At regular intervals, check the oil level in the reservoirs.
Lubricate the brake lever pivot with grease
Check to be sure that all bolts are tightened to the correct torque specifications.

⚠ WARNING

Clean filler cap before removing. Use only Tektro mineral oil brake fluid from a sealed container.

Pads should be replaced if they become contaminated or have less than 2.5mm thickness (Pad friction material and metal backing plate).

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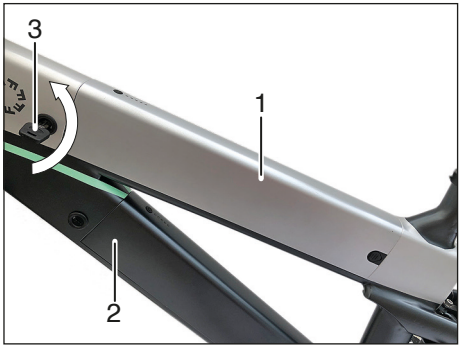
Checking the Battery Fuse



CAUTION

Never use a higher rated fuse or repair the fuse. Improper handling can destroy the entire electrical system!

If the fuse blows for no apparent reason, please contact a local workshop / authorized partner.

NOTE

If blown replace with a 15A blue mini car fuse (2 pieces are in the battery).

Replacing a fuse

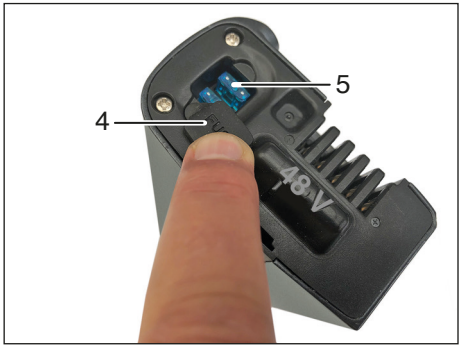
NOTE

If necessary, remove the upper battery (1) or the lower battery (2).

The batteries are secured to the frame with a lock.

- Insert key (3) and while supporting the battery turn to the left.
- Swing the battery (1) outwards and remove.

Checking the battery fuse



- **Open the cover (4) on the battery and replace the fuse (5).**
- **When replacing the fuse, ensure that it is correctly seated.**
- **Installation is the reverse order.**

Modell	**FUELL Flluid 1**	**FUELL Flluid 1S**	**FUELL Flluid 1E**
E-Bike Class	Class 1 (Pedelec)	Class 3 (SpeedPedelec)	Class 3 (SpeedPedelec)
General			
Weight depending on the equipment	About 31 kg / 69 lbs with battery		
Perm. total weight	max. 130 kg (287 lbs)		
Perm. rear tray weight	max. 18 kg (40lbs)		
Dimensions (L x B x H) mm	1800 x 650 x 1200		
Seat height mm (in)	930 (36.6) to max. 1120 (44)		
Top Speed	Pedal assist up to 32 kph (20 mph)	Pedal assist up to 45 kph (28 mph)	Pedal assist up to 45 kph (28 mph)
Chassis			
Frame	Aluminium		
Fork	Suntour XCM34 Boost 27.5” diameter 120 mm travel		
Tire front and rear	Pirelli 27.5" x 2.25		
Tire pressure front and rear	max. 3.0 bar (44 psi), min. 2.0 bar (29 psi)		
Brake, Front	Tektro HD-E 350 hydraulic disc brake; Ø180 mm		
Brake, Rear	Tektro HD-E 350 hydraulic disc brake; Ø180 mm		

<table>
<tr><th>Model</th><th>FUELL FIluid 1</th><th>FUELL FIluid 1S</th><th>FUELL FIluid 1E</th></tr>
<tr><td colspan="4">Drive</td></tr>
<tr><td>Belt drive</td><td colspan="3">Toothed drive belt</td></tr>
<tr><td>Belt</td><td colspan="3">GATES Carbon Drive</td></tr>
<tr><td>Pedal</td><td colspan="3">WELLGO with reflector</td></tr>
<tr><td>Bottom bracket</td><td colspan="3">BSA bottom bracket with external speed sensor</td></tr>
<tr><td>Gear shifting</td><td>SHIMANO NEXUS 5E
SG-C7000-5D SL-C7000-5</td><td>SHIMANO NEXUS 5E SG-
C7000-5D SL-C7000-5</td><td>ENVIOLO CA
Continuous Variable Transmission</td></tr>
<tr><td colspan="4">Eletrical</td></tr>
<tr><td>Lighting</td><td colspan="3">Roxim Z4E Pro; Ultra bright and Ultra wide</td></tr>
<tr><td>Display</td><td colspan="3">Display 3.2 Inch display for program selection rechargeable battery, capacity indicator, speed, distance, odometer, tripometer, push assist</td></tr>
<tr><td>Mode</td><td colspan="3">5 Ride assist modes:
<table>
<tr><th>Assist Level</th><th>Power Assist %</th></tr>
<tr><td>1</td><td>50%</td></tr>
<tr><td>2</td><td>80%</td></tr>
<tr><td>3</td><td>150%</td></tr>
<tr><td>4</td><td>210%</td></tr>
<tr><td>5</td><td>300%</td></tr>
</table>
and pedal assistance, until approx. 20mph/32 kmh for FIluid 1, and 28mph/45 kmh for FIluid 1S/1E
Then the engine switches off progressively and there is then no more assist</td></tr>
</table>

Model	FUELL Flluid 1	FUELL Flluid 1S	FUELL Flluid 1E
Motor – Drive Unit	Middle Motor		
Nominal voltage	48 Volt		
Rated capacity	500W	500W	500W
Torque	100 Nm	100 Nm	100 Nm
Transmission	Planetary gear in the motor housing		
Battery Pack	2x Lithium-Ion (Li-Ion) Battery Pack		
Nominal voltage	48 Volt		
Peak current	15 A		
Rated capacity / Rated power	21 Ah / 1008 wh total		
Weight	Approximately 2.9 kg (6.5 lbs)		
Operating range with engine operation	At a total weight of approx. 100 kgs, correct air pressure, even road surface, without strong headwind etc. : up to 200 kms / 125 miles in pedelec operation level 1		
Lifespan depending on the battery load / Battery usage	Approximately 500 to 1,000 charging cycles		
Charger	Input voltage 100-230 V / 50-60 Hz		
Charging voltage	54.6 Volt		
Charging current	3.0 A		
Display	LED red / green		
Weight	Approximately 365 g (0.8 lbs)		
Charging time when the battery is empty	Approximately 2.5 hours = 80% battery capacity.		

Warranty / Guarantee

Within the scope of its warranty obligations, Fuell Inc. provides the following services to the purchaser via an authorized specialist workshop / partner workshop in the event of a manufacturing defect:

1. Fuell Inc., through an authorized workshop / partner workshop, over a period of 24 months from the date of purchase, will remedy any defects resulting from defects in material or workmanship by repairing or replacing the affected part according to the legal warranty regulations.
2. By installing spare parts in the event of a warranty claim, the current warranty period will not be restarted or extended.
3. Excluded from the warranty are wear parts and signs of wear as a result of the intended use as well as damage due to improper handling and improper use.
4. The following list gives an overview of the respective wear parts excluded from the warranty:

- tires, tubes, spokes
- Lamp
- Fuse (battery)
- Cable / plug
- Brake pads, rims
- Wheel bearings, steering bearings, bottom bracket
- Belt, belt drive
- Painting, coatings, stickers / decors
- Cables, circuit components, sprocket
- Stand
- Self-locking nuts, split pins, glued screw connections, securing plates

5. Not included in the warranty:

- Consumable that are not related to recognized defects.
- All maintenance work or other work related to accident or extreme operating conditions
- All circumstances such as noise, vibrations, color changes, wear and tear that do not affect the basic and driving properties.
- Loss of use, loss of earnings, telecommunication, salvage, towing and underwriting costs as well as all other financial costs or damages.

6. The buyer’s warranty will be void in the case of: modification of the Flluid, attachment of accessories and spare parts that have not been approved by FUELL Inc. Also, service by an unauthorized or unqualified workshop as well as non-compliance with the maintenance interval will also void the warranty.
7. If a warranty claim is submitted, the buyer must submit the duly completed service booklet and proof of purchase.

10 Year Warranty on the Frame

A warranty claim can only be asserted upon presentation of the proof of purchase and intended use. The warranty begins on the day of purchase, is exclusive to the first owner and is non-transferable. The warranty is only valid for private use and not for commercial use.

1. The warranty is valid for the durability of the frame.
2. The warranty is valid only if the service intervals are followed.
3. Maintenances and maintenance notes for the Flluid must be observed and retained.
4. Warranty service can only be carried out by an authorized specialist workshop / partner workshop.

The warranty does not apply to:

1. Normal wear and tear.
2. Installation of spare parts or attachments not originally intended or compatible with this pedelec.
3. Damage or malfunction due to accidents, improper use, negligence or visible external damage.
4. Labor costs for replacement or retrifitting.
5. Consequential damages as well as indirect and direct costs such as loss of use, loss of earnings, telecommunication, salvage, towing and take-back costs as well as all other financial damage or costs.
6. Damage caused by falling rocks, hail, road salt, industrial emissions, lack of maintenance, incomplete / incorrect maintenance, etc.

2 Year Warranty on the Battery

A warranty claim can only be asserted upon presentation of the proof of purchase and intended use. The warranty begins on the day of purchase, is exclusive to the first owner and is non-transferable. The warranty is only valid for private use and not for commercial use.

1. The warranty is valid for the function of the battery.
2. The warranty is only valid if the inspections and maintenance for the pedelec are complied with.
3. Maintenances and maintenance notes for the battery must be adhered to.
4. A warranty service can only be carried out by an authorized specialist workshop / partner workshop.
5. The warranty period is not extended by a battery replacement.

The warranty does not apply to:

1. A deeply discharged battery after long-term non-use or improper handling.
2. An annual capacity loss of up to 10%. This is normal wear of the battery cells.
3. Later purchased additional batteries.
4. Damage or malfunction due to accidents, improper use, neglect or obvious external damage and irregular use.
5. Consequential damages as well as direct and indirect costs such as: loss of use, loss of earnings, telecommunication, salvage, removal and retention costs as well as all other financial damage or costs.

MAINTENANCE PLAN

The work specified in the maintenance plan includes - as far as necessary - the cleaning, lubrication and adjustment of the respective components or the replacement of components in case of wear or damage. Fuell Inc. recommends that it be performed by an Authorized Service Center. In extreme operating conditions or intensive use, we recommend maintenance every 6 months.

Components	Every 6 Months or 500 km	Every 12 months
Check tires for damage	x	x
Check tire air pressure	x	x
Check wheels for concentricity, retighten spokes if necessary	x	x
Check brake system for function	x	x
Check brake pads	x	x
Check steering bearing	x	x
Check handlebar / stem for tightness	x	x
Check saddle / seatpost for tightness	x	x
Check frame / fork for damage	x	x
Check gear shifter	x	x
Check cables	x	x
Check drive belt	x	x
Check all other bolts and nuts for tightness	x	x
Check electrical drive system; Check connectors for tightness; Magnetic disk / sensor distance (2-3 mm)	x	x
Check lighting / reflectors	x	x
Check rear wheel track	x	x
Recharge battery with original charger if necessary	x	x

Maintenance

1. MAINTENANCE	2. MAINTENANCE	3. MAINTENANCE	4. MAINTENANCE
Signature or Stamp	Signature or Stamp	Signature or Stamp	Signature or Stamp
Date	Date	Date	Date .....

5. MAINTENANCE	6. MAINTENANCE	7. MAINTENANCE	8. MAINTENANCE
Signature or Stamp	Signature or Stamp	Signature or Stamp	Signature or Stamp
Date	Date	Date	Date .....

Error Checklist

Possible Errors	Remedy
The system can not be switched on via the control panel	The battery is not charged The battery is defective The fuse in the battery is blown The battery is not turned on The battery contacts are dirty The plug connection to the display has come off - restore contact The control panel / display is defective
The display is on, but there is still no assist	The assist mode is set to "0". The speed is higher than 20/28 mph FIluid1/1S The battery is almost empty and the last bar in the display flashes The battery contacts are dirty "error 23" or "error 24" is displayed; the plug connection to the engine has come off – restore contact
The motor does not work despite correct operation	A brake contact has an error - Check cable contacts or replace the lever unit; if necessary, the display shows "error 25" The distance of the magnetic disc to the sensor on the belt wheel is> 3mm; this distance must be corrected
The engine does not deliver the same performance as immediately after product purchase	Turn the system off and on again; adjust the power settings, if there is still no improvement, the battery may require maintenance – please email FUELL.
The engine shuts off when driving uphill	The max. motor temperature has been exceeded and the motor power is withdrawn for safety reasons. The load of the engine is too large - the engine switches off for self-protection
Engine does not work at low temperatures.	Under a temperature of -10 ° C, there is no power from the battery, as this could damage it. Warm the battery slowly

Error Checklist

Possible Errors	Remedy
Short range	The battery was not fully charged The battery was charged when cold The range depends on many different factors, such as starting and stopping, selection of gear and assist mode, tire pressure, rider's weight, etc… The battery has already lost its performance potential through natural aging
Lighting is not working	The system is not switched on Even when the battery is dead, the system and lighting can be turned on, but the mode must be set to "0" There is a defect in the lighting system; check cable connections.
Unusual sounds occur while driving	The gearshifter is not set correctly; adjust gearshifter. Cranks are not tightened correctly; tighten with correct torque. Bottom bracket has loosened; follow service procedure. Stem / handlebar bolts have loosened; retighten. Saddle / seatpost clamp has not been tensioned properly; follow clamp tension adjustment procedure.
The brake does not deliver the same braking power as immediately after product purchase	The pads are worn out; replace pads The brake is not adjusted correctly; adjust correctly The hydraulic brakes require service The brakes get very hot when going downhill! Alternating brakes; front & back
Charger does not charge the battery	Under a temperature of -10 ° C, the battery can not be charged, as this could damage it. Warm the battery slowly by moving it to a heated environment. Plug not fully seated, battery defective, charger defective

Bike Pass

To protect your property, we ask you to fill out this form. Keep the bicycle passport in your wallet. If your bike is stolen, using the bike passport details will help the police in finding your property. Please remember to always switch off the bike completely and connect the cable or padlock to a fixed object.

Bike Pass

Type:	e-Bicycle (Pedelec)
Manufacturer:	FUELL
Frame Number:	.....
Frame Color:	.....
Battery Serial Number:	.....
	.....
Distinguishing Marks:	
	.....

Store somewhere safe.

FUELL Inc.
244 Fifth Avenue, Suite A209, New York, NY 10001, USA

E-Mail: fuell@fuell.us · www.fuell.us