

Converted E-bikes

Guide for passengers

What is a converted e-bike?

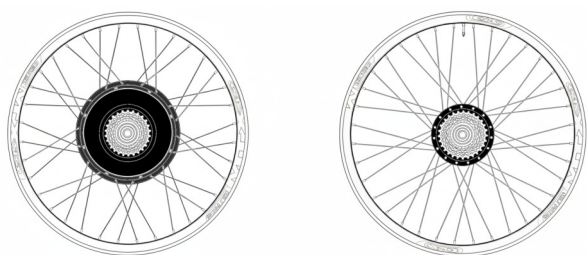
Converted e-bikes are pedal bikes that have been converted to have an electric motor.

This includes pedal bikes converted 'pre-purchase' (i.e. from a retailer) or 'post-purchase', and includes conversions installed by a bicycle mechanic.

Conversion bikes require **motors**, **controllers** and **batteries** to function.

Motors come in three main types:

1. *Motors inside a wheel* connected to the spokes. These motors are typically large and high powered (left image, in black). Factory e-bikes may also have motors in the wheel, though these are typically smaller and similar in size to the gears (right image).



2. *Mid-drive motors* attach a motor near the pedals to drive the bike forward. They can be identified from compliant e-bikes because the motors sit outside the bicycle frame.



3. *Prepackaged motors* are less common and attach a self-contained unit to the back wheel. These systems can usually be easily removed.



Controller boxes house the computers that control the motor. They are often housed in plastic or metal boxes, or in bags.



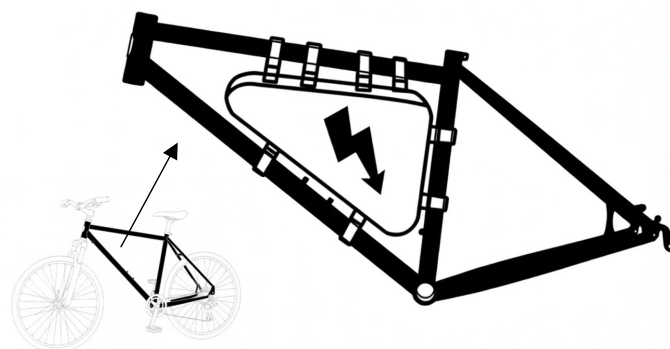
Batteries are added to the bike to provide power, and these can be either suspended between the frame, taped to the frame or attached with a plate like non-converted e-bikes.



Is my bike converted?

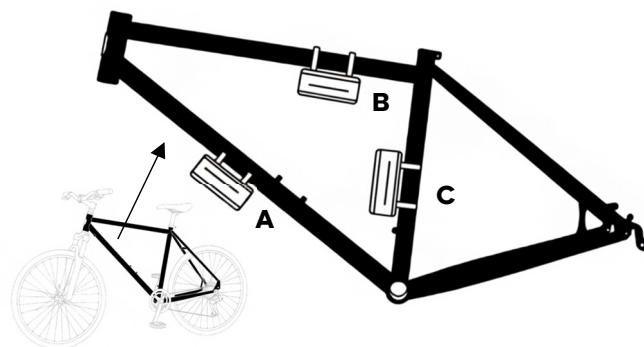
Conversion bikes typically have one or more of these visually identifiable features:

1. A battery attached or suspended to the bicycle frame using hooks, loops, tape or cable ties



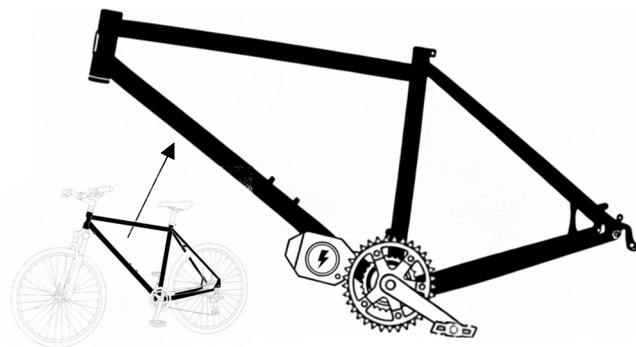
Some conversions will attach the battery to the frame using duct tape and/or cable ties.

2. An externally mounted controller box



A controller box is often located in a box or bag on the down tube (A), top tube (B) or seat post (C). By contrast, factory bikes have the controller hidden internally.

3. An externally mounted motor



Motors are only permitted if they are housed within the frame or wheel. Attachments outside of the frame that drive the pedals (mid-drive conversion) or to the back wheel (prepackaged) are converted e-bikes.

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Examples of converted e-bikes

