



Electric Bike Conversion Kit

Installation's Manual

V.1.5

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This manual applies to the OXYDrive CST 11Ah, CST 13Ah HT conversion kits.

PLEASE NOTE: Not all the illustrations may apply to your specific kit. This is a DIY conversion kit and some illustrations may vary from the actual product purchased. The entire concept of fitting is the same on all kits. Also note that installation on various bikes may vary and there may be a need to take an individual approach for every bike conversion. OXYDrive does not take any liability for the damages caused to the bike frames or any other bike components. The conversion kits are fitted at owner's risk.

## **1. Before installation**

Before installing this kit please note that there is a minimum skills required to run a successful installation. If the end user feels uncomfortable to carry on the assembly process it is advised to take it to the nearest dealer or good bicycle shop with workshop facilities. To run a successful installation the assembler will need the basic workshop tools too. Please read the next chapter

## **2. Tools required for installation**

All good bicycle workshops will have all necessary tools to carry on the assembly process:

Tools required for installation:

- Set of allen (hex) keys, 2-6mm
- Cable cutters
- Crank puller
- Bottom Bracket Tool
- 19mm spanner (wrench)
- Set of tyre levers
- Bicycle pump
- Flat and cross screwdrivers

## **3. Installing the motor**

### **Step 1**

Fit the bicycle tyre along with the rim tape to the new OXYDrive wheel.

### **Step 2A Fitting front wheel motor**

Try to slot the motor into the forks drop outs. Please note that some forks may only have a 9mm drop outs. The motor axle is 10mm and therefore may not fit.

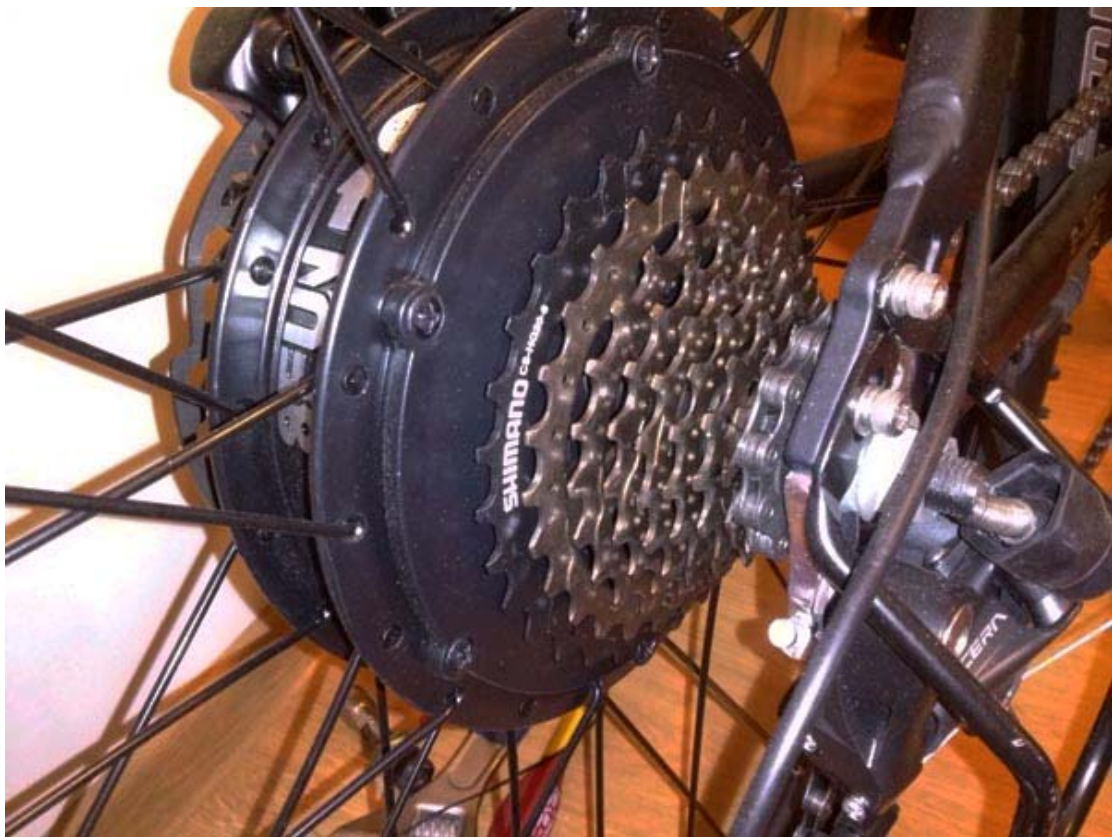
**IMPORTANT:** The motor's axle must slot in to the dropouts easily with no use of any force. If you fork drop out is too narrow please use a file to file off the surface by 0.5 mm on each side.

### **STEP 2B: Fitting rear wheel cassette motor**

Before fitting the rear cassette motor into frame dropouts please fit the cassette on the motors ratchet. You need to use the cassette tool to tight up the cassette. The amount of torque used to tighten up cassette should be specified on the locking nut of each cassette. Always use good quality 19mm spanner to secure the locking nuts in the frame.

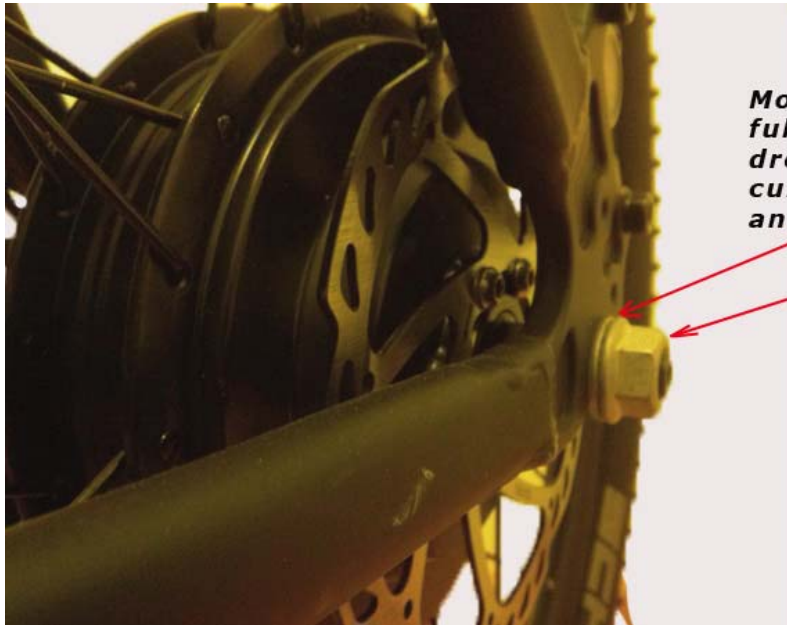
### **Step 3**

When fitting the motor regardless if its front or rear driven it is generally better to direct the motor cable towards the bottom. It will prevent then any possibility of water getting into the motor. For mountain bike users this position of motor cable brings higher risk of ripping the motor cable in the off road terrain.



### **Step 4.**

It is crucial to pay extra attention of the order of fitting the locking nuts.



*Motor's axle must fully slot into frame drop-outs and secured with washer and locking nut*

#### **Step 5.**

#### **For rear wheel driven kit**

Securing the front wheel is very important. The locking nuts should be well tight with a minimum torque of 12Nm.

**IMPORTANT:** The locking nuts should be regularly checked every few rides to ensure the wheel is securely fitted.

## **4. Installing the battery unit**



The battery holding unit should be fitted normally in the place of the water bottle cage. Most of the bicycles already have ready made frame mounts where the water battery holding unit can be attached to.

This manual does not give any recommendations on the bolts size or torque as it all depends on the each individual frame requirements. Please note that battery holding unit should be well secured to the frame. Please use at least the same torque as for the water bottle cage. For frames with a very think tubes it is advised to add additional double sided counting tape (not included)

**Warning to high performance tubing**

Please note that some manufacturers' use high performance double or even triple butted tubing's to reduce the weight of the frame. It means that frame's tubing's are very weak in some sections and should not be pressed with any kind of clamps. Please pay extra attention when securing your battery holding unit with additional zip ties to avoid the damage to the frame. OXYDrive does not recommend to fit these conversion kits on the carbon frames.



The battery should be slotted on the holder's rail and then drop down to connect with controller connector. Then battery should be locked with the key.

## 5. Installing pedal assist sensor

Before attempting this step please note that you'll need the crank puller and the bottom bracket tool.

The speed sensor can be located on either left or right side of the bottom bracket. It entirely depends on the type of the bike and the available space for the speed sensor and the magnet disc.



The speed sensor should be located under the bottom bracket shell.



The magnet disc should be fitted on the axle with magnets located approx 1-3mm from the speed sensor.

**IMPORTANT:** OXYDrive is currently compatible with the square tapered bottom brackets. In some case if the axle is too short or there is not enough room the bottom bracket might need to be replaced for the one with longer axle.



## 6. Fitting the LCD console

Installation of the LCD console is fairly easy. The console should be located on the left hand side of the handlebars. This can be slotted on the handlebars and should be secured with allen key.



Fitting the throttle and the power setting buttons will depend on the type of the bike and this has to be tried by each user. Throttle can be located on either left or right hand side of the handlebars. If fitted on the left the thumb twist will have to move forward then.

## 7. Installing the brake levers

Existing brake levers should be replaced by the brake levers supplied in the kit. The sensor from the lever should be plugged in directly into display's 2-pin connector.

## 8. Connecting the connectors.

When connecting the connectors the extra caution shall be taken. Each connector has an arrow moulded on the surface. When joining connectors it is crucial that the arrows always are pointing out on each other. In this set the right pins meet their joining sockets.

**Please note that neglecting this step may cause the shortcuts in the entire system which will cause the permanent damage to the controller and the harness.**



## 9. Connecting the brake lever and throttle to the LCD console

The junction harness has been replaced by LCD console and now all connectors from the brake levers plug in directly into LCD display.

Brake levers plug in to 2-pin connector on the display

Throttle plugs in to 3-pin connector on the display



Thanks for reading, if you still have any questions please email us at [sales@oxydrive.co.uk](mailto:sales@oxydrive.co.uk) or call directly on +447738866502 or +442081230639