



LCF Technics Product User Guide

Product: TSDZ2 E-Bike Conversion Kit

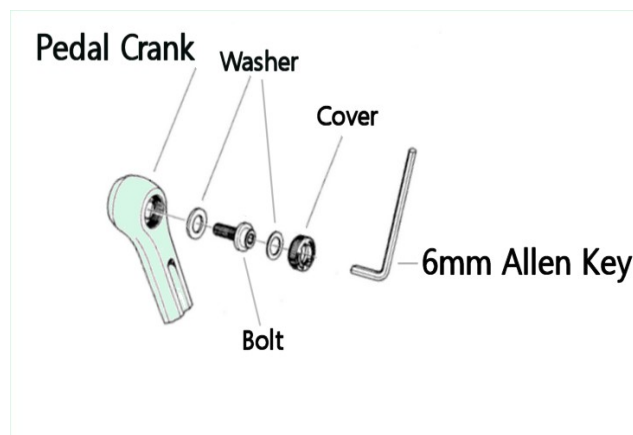


TSDZ2 Mid Motor Drive System Installation

Old Pedal Crank Removal Process

To install your new mid motor, first it will be necessary to remove your old pedal cranks, chainwheel and BB axle.

Step 1. Using a 6mm Allen key, remove your pedal crank bolts.





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Step 2. Use a crank removal (extractor) tool to remove the cranks. (See fig. 1)



Crank Removal Tool and
Bottom Bracket Extractor

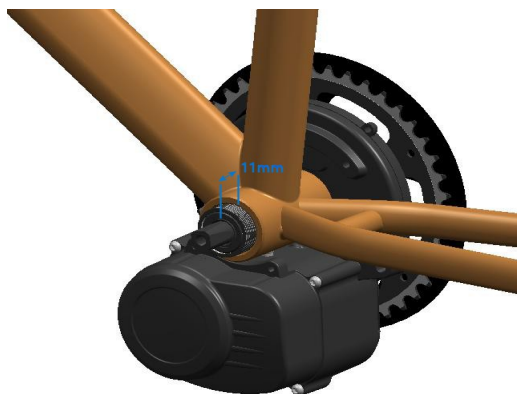
Figure 1

Step 3. Use a bottom bracket removal tool to remove the BB axle.



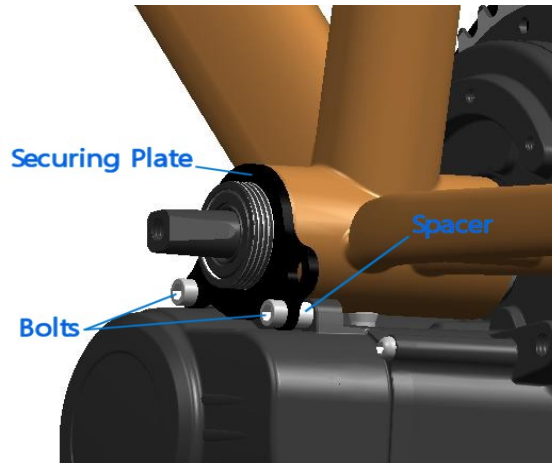
Motor Installation Process

Step 1. Push Motor BB axle inside BB tube (68mm / 73mm) as per picture below, the exposed axle length on the left side is 11mm. Use supplied washers as required.



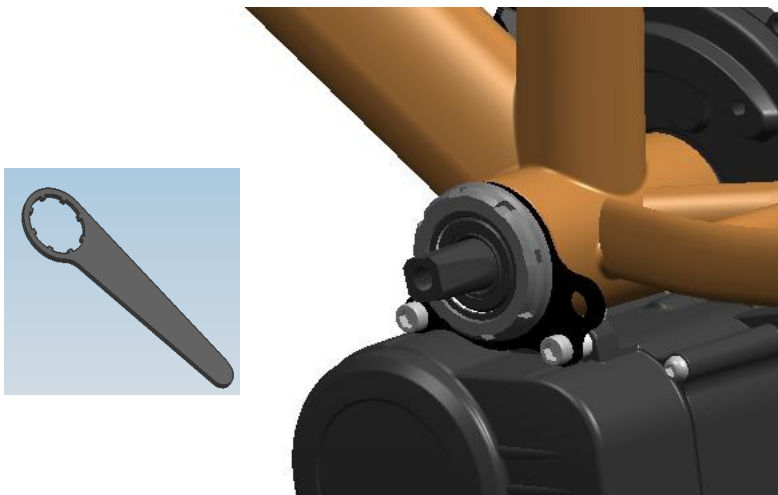
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Step 2. Install the Securing plate. Please refer to the picture below.



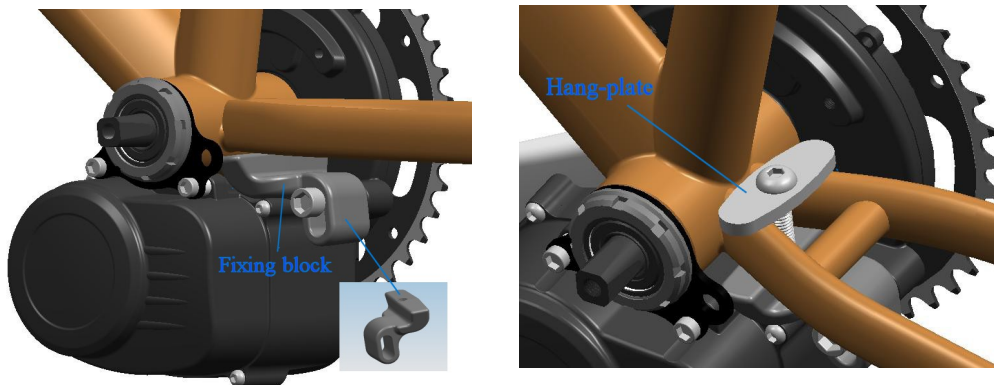
1. Place securing plate onto BB axle.
2. Place the spacers, as required for your BB tube width, between motor and securing plate.
3. Tighten the securing plate and the motor with two M5×16 bolts.

Step 3. Using supplied wrench, screw the M33.5 nut onto the BB axle, tighten to 40N·m torque.



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Step 4. Fix the main body of the Motor onto bike-Frame.



1. Install the fixing block onto the motor with M8*40 bolt, do not tighten.
2. Using a M8 * 45 bolt and the hang-plate to tighten the fixing block and motor.
3. Tighten the bolts to 40N.m torque.

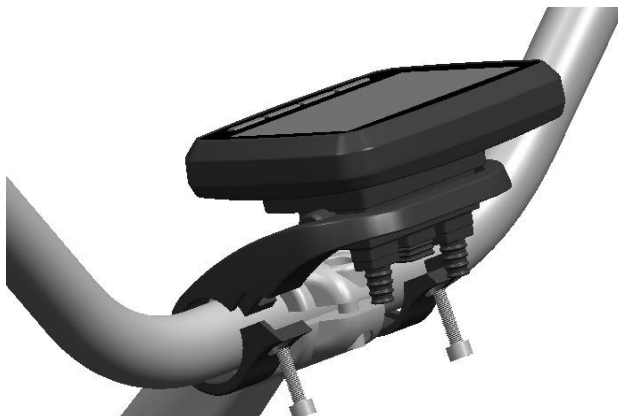
Step 5. Install arm-cranks.



1. Using M8×14 bolts to install the arm-cranks. The locking torque is 40N.m.

Display Installation Process

Step 1. Install the VLCD5 display.



Install the LCD display onto the handlebar using 2pcs of M4×14 bolts and 2pcs of M4 nuts

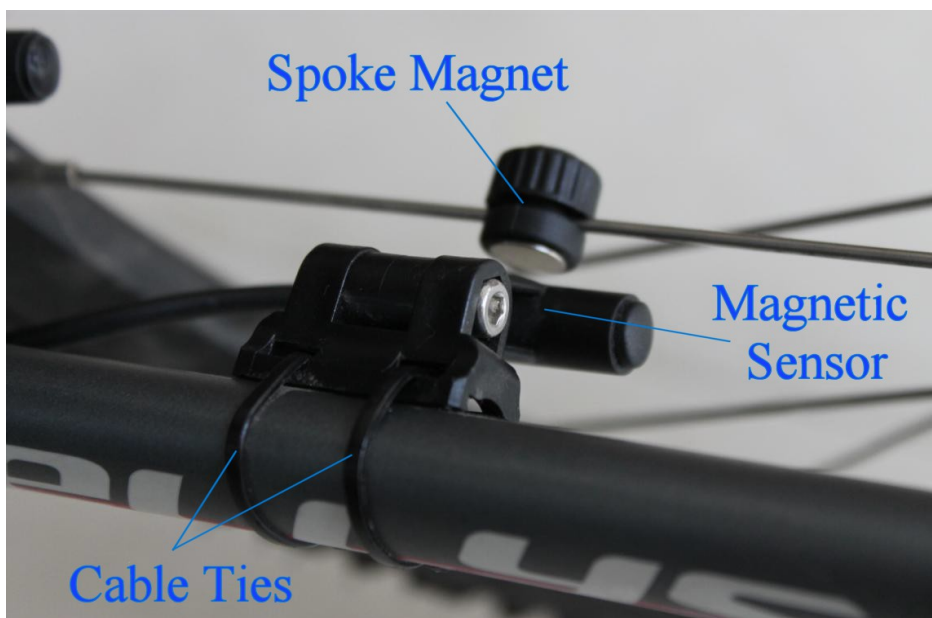
The brackets are 32 mm Dia. with adjust rings for different handlebar sizes.

Step 2. Install left hand remote control button panel at a convenient location near the handlebar grip.



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Step 3. Install the magnetic sensor onto the bike rear fork with the two cable ties provided as shown below.



Install the spoke magnet on to a wheel spoke.

The distance between the sensor and the spoke magnet should be 5mm to 10mm. Tighten the M4 bolt.

System Connections

Step one: Connect the display short cable to the remote operation button panel.



The 5 pin connectors are snug to ensure a watertight installation. Align the flat spots on the connectors and press together in a wriggling motion.



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Step two: Connect the main motor cable (grey connector) to the VLCD5 display using the long cable 6 pin connector.

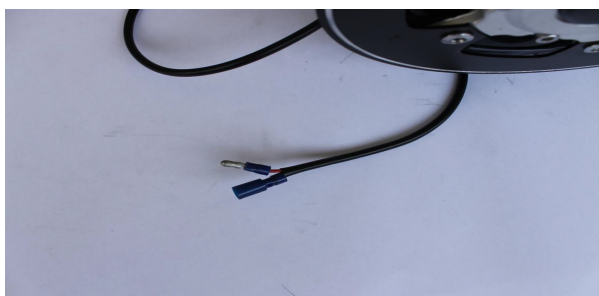


The 6 pin connectors are snug to ensure a watertight installation. Align the flat spots on the connectors and press together in a wriggling motion.

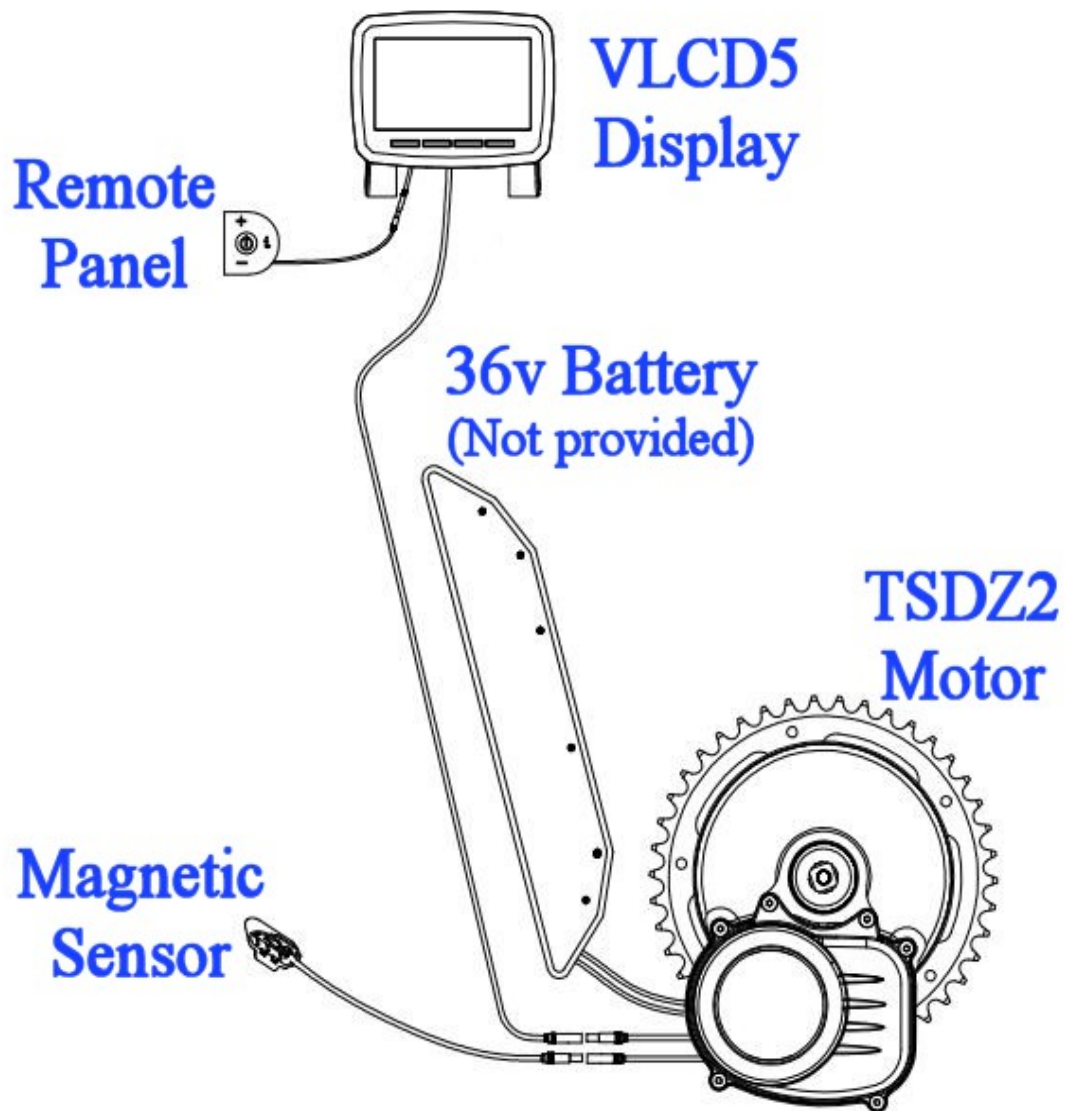
Step three: Connect the main motor yellow banded connector to the magnetic sensor using the yellow 'Y' splitter sensor cable (either of the two). The connection method is as in the previous 2 steps.



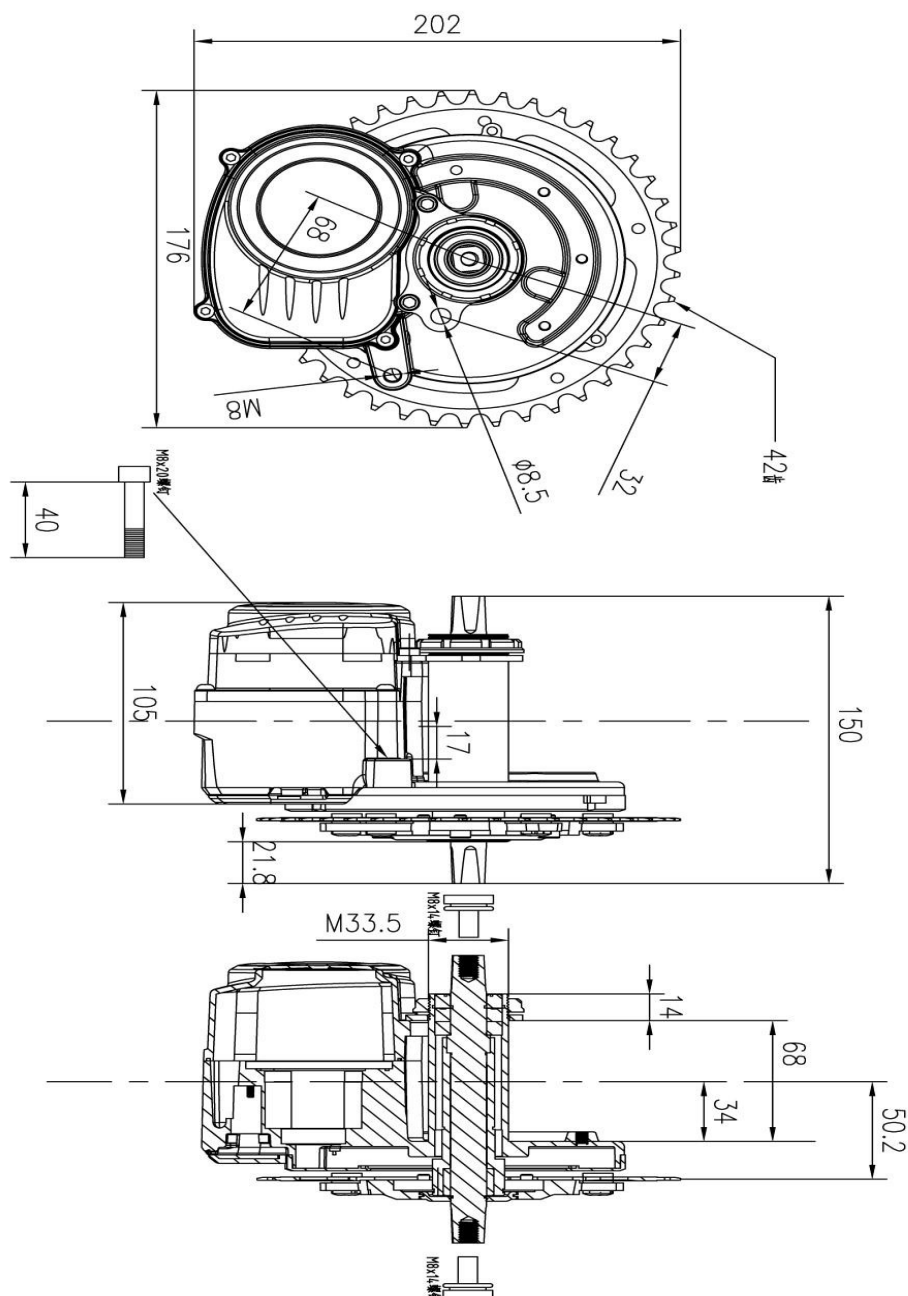
Step five: Connect the motor power cables to your chosen 36 volt battery.



System connection Diagram



Motor Dimensions





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Parts List

1. Mid motor assembly * 1
2. VLCD5 display * 1
3. VLCD5 display bracket (\varnothing 32) * 1
4. Left hand remote operator panel * 1
5. Magnetic sensor * 1 set
6. Securing plate * 1
7. M33.5mm bolt * 1
8. Hanging plate * 1
9. Securing block * 1
10. M8 X 45 round head bolt * 1
11. M5X 16 Hexagon socket head bolt * 2
12. 5X5 Aluminum washer * 2
13. Aluminium spacers * 1 set
14. Wrench * 1
15. Lighting cable * 1
16. 170MM crank-arm * 1 set

Motor Specifications

Required Voltage: 36 volts
Wattage: 250 watts
Sensor Type: Torque
Controller Position: Integrated
Assist Cut-off: 25 kph
Chainring size: 42T
Chainring standard: 110BCD
Assist Levels: 4

System Configuration

System configuration information for the VLCD5 display can be found here:

<https://lcftechnics.eu/owner-manuals-downloads/>