

CNCEST EZ-156F

CNCEST EZ-156F 100CC 4-Stroke Bicycle Engine Kit User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the safe and effective installation, operation, and maintenance of your CNCEST EZ-156F 100CC 4-Stroke Bicycle Engine Kit. Please read this manual thoroughly before attempting any installation or operation. Proper understanding of these instructions is crucial for ensuring safety and optimal performance of the engine kit.

Important Note: Professional installation is strongly recommended for this product to ensure correct assembly and safe operation.

2. PRODUCT OVERVIEW

The CNCEST EZ-156F is a 100cc 4-stroke, single-cylinder, OHV (Overhead Valve) petrol engine designed to convert standard bicycles into motorized bikes. It features forced air cooling and a recoil start system. This kit includes all necessary components for installation on bicycles with large triangular frame space, typically beach bikes.

2.1 Package Contents

- 1x 100cc 4-Stroke Gasoline Engine
- 1x Fuel Tank
- 1x Base Bracket
- 1x Exhaust Pipe
- 1x 44 Tooth Chain
- 1x Chain Tensioner
- 1x Belt
- 1x Guard
- 2x Fixed Iron Pieces
- 1x Spark Plug Tool

- 1x Fuel Line
- 1x Fuel Tank Cap
- 1x Exhaust Cushion
- 1x Fuel Filter
- 1x Fuel Valve
- 1x Belt Tension Adjusting Tool
- 1x English Manual
- Other Mounting Accessories



Figure 2.1: The core engine unit, featuring the air filter, recoil starter, and belt drive mechanism.



3. SPECIFICATIONS

Parameter	Value
Model	EZ-156F
Engine Type	Forced Air Cooling, 4-Stroke, OHV, Single-cylinder, Inclined by 25 Degrees
Starting System	Recoil Start
Max Output	3 HP
Rated Power	2 KW / 3600 rpm
Max. Torque	4.5 N.m / 2500 rpm

Fuel Tank Capacity	1.6 L (0.42 gal)
Fuel Consumption	<420 g/KW.h
Oil Capacity	0.4 L (0.1 gal)
Oil Consumption	≤6.8 g/KW.h
Min. Stable Speed Unloaded	3600 rpm
Reduction Ratio	1:1
Bore x Stroke	56 x 40 mm
Displacement	100 cc
Compression Ratio	7:1
Product Size (L*W*H)	28.5 x 35 x 28 cm (11.2 x 13.7 x 11 in)
Net Weight	20 kg (44 lbs)
Material	Aluminum, Iron, Plastic



Figure 3.1: A visual guide providing key measurements for the engine, fuel tank, exhaust pipe, and other parts, essential for installation planning.

4. SAFETY INSTRUCTIONS

Adherence to the following safety guidelines is critical to prevent injury and damage to the product.

- Always wear appropriate safety gear, including a helmet, eye protection, and gloves, when operating or working on the engine.
- Ensure the engine is installed securely on a bicycle frame designed to accommodate it.
- Operate the motorized bicycle only in well-ventilated areas. Exhaust fumes contain carbon monoxide, which is dangerous.
- Keep hands, feet, and clothing away from moving parts, especially the belt, chain, and engine fan.
- Do not refuel the engine while it is running or hot. Allow it to cool down to prevent fire hazards.
- Store fuel in approved containers in a cool, well-ventilated area, away from ignition sources.
- Regularly inspect all components for wear, damage, or loose connections. Address any issues before operation.

- Do not modify the engine or its components. Unauthorized modifications can lead to malfunction and void any warranty.
- Be aware of local laws and regulations regarding motorized bicycles.

5. INSTALLATION GUIDE

This section outlines the general steps for installing the engine kit. Due to the complexity and safety implications, professional installation is highly recommended.

5.1 Preparation

- Ensure your bicycle has sufficient triangular frame space to accommodate the engine and fuel tank.
- Gather all tools required for assembly (not included).
- Review all components against the package contents list to ensure everything is present.

5.2 Engine Mounting

1. Position the engine within the bicycle frame's triangular space.
2. Secure the engine to the frame using the provided base bracket and fixed iron pieces. Ensure the engine is level and stable.

5.3 Fuel System Installation

1. Mount the fuel tank securely to the bicycle frame, typically on the top tube.
2. Connect the fuel line from the fuel tank to the fuel filter, and then from the fuel filter to the fuel valve, and finally to the carburetor. Ensure all connections are tight and free of leaks.
3. Install the fuel tank cap.

5.4 Exhaust System Installation

1. Attach the exhaust cushion to the engine's exhaust port.
2. Secure the exhaust pipe to the engine, ensuring a tight seal. Route the exhaust pipe away from moving parts and the rider.

5.5 Drive System (Belt and Chain) Installation

1. Install the belt onto the engine's drive pulley and the rear wheel's driven pulley. Use the belt tension adjusting tool to achieve proper tension.
2. Mount the 44-tooth chain sprocket to the rear wheel.
3. Install the chain tensioner to maintain proper chain tension.
4. Connect the chain between the engine's output sprocket and the rear wheel's sprocket.
5. Install the guard over the moving parts of the drive system for safety.

5.6 Controls Installation

1. Install the throttle grip and cable onto the handlebars and connect it to the carburetor's throttle linkage.
2. Ensure the throttle operates smoothly and returns to the idle position when released.

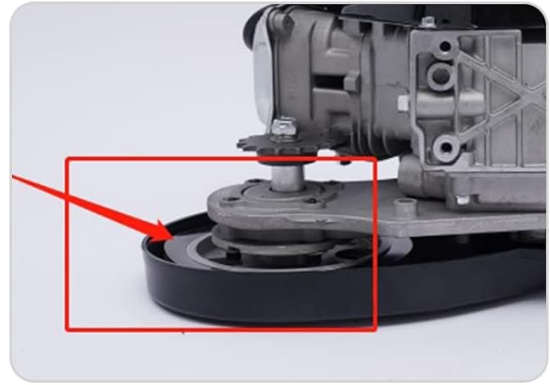


Figure 5.1: This image highlights the engine's belt drive system and several accessory components from the kit, such as sprockets, fuel tank, and mounting hardware.



Figure 5.2: This image focuses on the belt drive system, illustrating the belt, pulleys, and associated components responsible for power transmission.

6. OPERATING INSTRUCTIONS

6.1 Pre-Operation Checks

- **Fuel:** Ensure the fuel tank is filled with appropriate gasoline.
- **Engine Oil:** Check the engine oil level. Refer to the engine's dipstick for correct levels. Use recommended 4-stroke engine oil.
- **Connections:** Verify all fuel lines, electrical connections, and mounting bolts are secure.
- **Tires & Brakes:** Ensure bicycle tires are properly inflated and brakes are functioning correctly.

6.2 Starting the Engine

1. Open the fuel valve.
2. If the engine is cold, apply the choke.

3. Ensure the throttle is in the idle position.
4. Pull the recoil starter handle firmly and smoothly until the engine starts. Do not let the rope snap back.
5. Once the engine starts, gradually release the choke as the engine warms up.

6.3 Stopping the Engine

1. Reduce the throttle to the idle position.
2. Close the fuel valve.
3. Engage the engine kill switch (if equipped) or allow the engine to run out of fuel.



Figure 6.1: A detailed view showing the orange handle of the recoil starter and the throttle control linkage connected to the carburetor.

7. MAINTENANCE

Regular maintenance is essential for the longevity and reliable operation of your engine kit.

- **Engine Oil:** Change engine oil after the first 20 hours of operation, then every 50 hours or annually, whichever

comes first. Refer to the engine's specifications for the correct oil type and capacity.

- **Air Filter:** Inspect and clean the air filter every 25 hours of operation or more frequently in dusty conditions. Replace if damaged.
- **Spark Plug:** Inspect the spark plug every 50 hours. Clean or replace as necessary. Use the provided spark plug tool for removal and installation.
- **Fuel Filter:** Inspect the fuel filter periodically and replace if it appears clogged or dirty.
- **Belt and Chain:** Check belt and chain tension and condition before each ride. Adjust tension as needed using the belt tension adjusting tool and chain tensioner. Replace worn or damaged belts/chains.
- **Fasteners:** Periodically check all nuts, bolts, and fasteners for tightness. Tighten as required.



Figure 7.1: A detailed view of the engine's air intake system, showing the red air filter and the carburetor assembly.

8. TROUBLESHOOTING

This section provides solutions for common operational issues. If problems persist, consult a qualified technician.

Problem	Possible Cause	Solution
Engine does not start	No fuel; Fuel valve closed; Choke incorrect; Fouled spark plug; Low oil level	Add fuel; Open fuel valve; Adjust choke; Clean/replace spark plug; Add oil
Engine runs poorly/lacks power	Dirty air filter; Stale fuel; Clogged fuel filter; Incorrect spark plug gap	Clean/replace air filter; Drain and refill with fresh fuel; Replace fuel filter; Adjust spark plug gap
Excessive smoke	Too much oil; Incorrect oil type; Engine wear	Check oil level and type; Consult technician for engine wear
Engine overheats	Blocked cooling fins; Low oil level; Overloading	Clean cooling fins; Check/add oil; Reduce load
Belt slipping	Incorrect belt tension; Worn belt	Adjust belt tension; Replace belt

9. DISPOSAL

When the engine kit reaches the end of its service life, it should be disposed of responsibly. Do not dispose of engine oil, fuel, or other fluids in household waste or drains. Contact your local waste management authority for information on proper recycling and disposal methods for engine components and hazardous materials.

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