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## IMAYCC 2STROKE Engine 100CC KITS

# IMAYCC 100cc 2-Stroke Bicycle Engine Conversion Kit

## INSTRUCTION MANUAL

Model: 2STROKE Engine 100CC KITS

### 1. INTRODUCTION

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This manual provides detailed instructions for the installation, operation, and maintenance of your IMAYCC 100cc 2-Stroke Bicycle Engine Conversion Kit. This kit is designed to convert a standard bicycle into a motorized bicycle, offering enhanced mobility. Please read this manual thoroughly before installation and operation to ensure safe and correct usage.

**Important Safety Notice:** Operating a motorized bicycle requires mechanical aptitude and adherence to all local laws and regulations regarding motorized vehicles. Always wear appropriate safety gear, including a helmet, and perform regular safety checks.

### 2. PACKAGE CONTENTS

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Verify that all components listed below are present in your package. If any parts are missing or damaged, please contact customer support.



Figure 2.1: Overview of all components included in the IMAVCC 100cc 2-Stroke Bicycle Engine Kit.

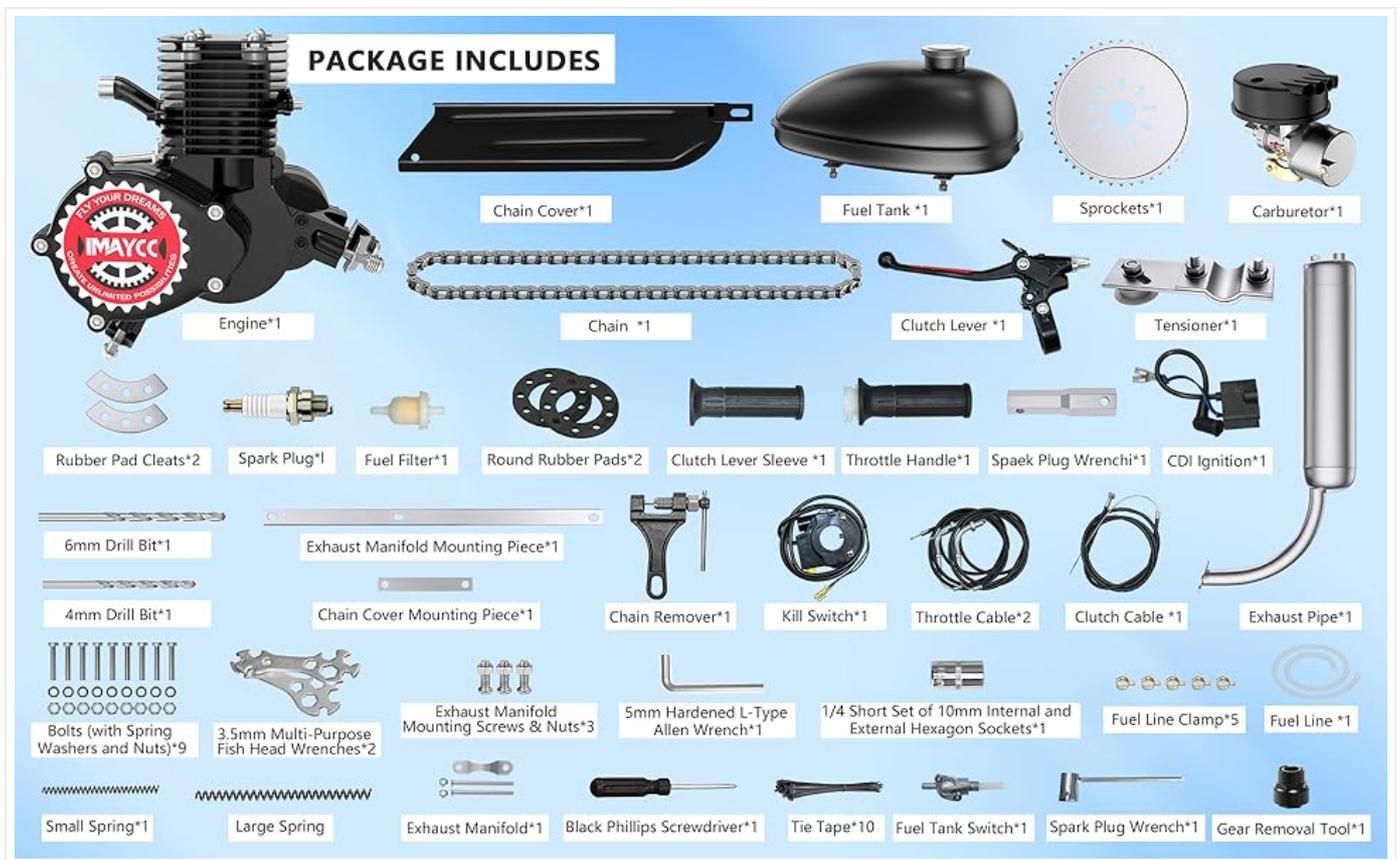


Figure 2.2: Detailed diagram illustrating each component and its quantity within the kit.

- Engine (100cc 2-Stroke Single Cylinder)
- Fuel Tank (3L Black Teardrop)
- Carburetor
- Chain Cover
- Sprocket (44-Tooth Chrome Drive)
- Chain (415 Bike Engine Drive Chain, 110 knots)
- Clutch Lever
- Tensioner
- Rubber Pad Cleats
- Spark Plug
- Fuel Filter
- Round Rubber Pads
- Clutch Lever Sleeve
- Throttle Handle
- Spark Plug Wrench
- CDI Ignition
- 6mm Drill Bit
- Exhaust Manifold Mounting Piece
- Chain Remover
- Kill Switch
- Throttle Cable
- Clutch Cable
- Exhaust Pipe (Chrome-Plated Muffler)
- Bolts (with Spring Washers and Nuts)

- 3.5mm Multi-Purpose Fish Head Wrenches
- Exhaust Manifold Mounting Screws & Nuts
- 4mm Hardened L-Type Allen Wrench
- 1/4 Short Set of 10mm Internal and External Hexagon Sockets
- Fuel Line Clamp
- Fuel Line
- Small Spring
- Large Spring
- Exhaust Manifold
- Black Phillips Screwdriver
- Tie Tape
- Fuel Tank Switch
- Gear Removal Tool

### **3. BICYCLE COMPATIBILITY**

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This engine kit is designed for most 26-28 inch wheeled bicycles with V-frames. This includes mountain bikes, cruisers, and road bikes. Ensure there is at least 10 inches of clearance between the bottom bracket and the top bar of the bicycle frame for proper engine fitment.

# Suitable for 26-28 Inch Bikes



Maximum front pipe diameter:	40mm	Maximum rear pipe diameter:	35mm
Number of sprocket teeth:	44 teeth	Number of chain teeth:	110 knots

Figure 3.1: Bicycle frame clearance requirements for the engine kit.



Figure 3.2: Various bicycle types compatible with the IMAYCC engine kit.

## 4. SETUP AND INSTALLATION

Installation requires basic hardware skills and tools. The process typically takes 2-4 hours for experienced individuals. If you are new to engine kit installation, it is recommended to consult online resources such as YouTube videos by searching "IMAYCC Bicycle Engine Kit" for visual guidance.

### 4.1 Required Tools (Not all included):

- Basic socket set
- Adjustable wrench
- Screwdrivers (Phillips and Flathead)
- Pliers
- Chain breaker (included)
- Drill (with 6mm bit, included)
- Loctite (threadlocker, recommended for critical fasteners)

### 4.2 Installation Steps:

1. **Engine Mounting:** Securely mount the engine within the bicycle frame using the provided mounting hardware. Ensure the engine is centered and does not interfere with pedals or other moving parts.
2. **Fuel Tank Installation:**



Figure 4.1: Fuel tank installation and fuel preparation details.

Mount the 3L teardrop fuel tank to the top bar of the bicycle frame. Connect the fuel line from the tank to the carburetor, ensuring the fuel filter is installed inline. Use the provided leak-proof gasket and ensure all connections are tight to prevent leaks. The fuel valve should be closed when parking.

3. **Sprocket and Chain Installation:** Attach the 44-tooth sprocket to the rear wheel. Install the 415 heavy-duty chain, adjusting its length with the chain remover tool if necessary. Install the chain tensioner to maintain proper chain tension.
4. **Exhaust System:** Install the chrome-plated muffler and exhaust pipe. Ensure all connections are secure to prevent exhaust leaks.
5. **Control Levers and Cables:** Install the throttle handle, clutch lever, throttle cable, and clutch cable onto the handlebars. Route the cables cleanly and ensure smooth operation.
6. **Electrical Connections:**

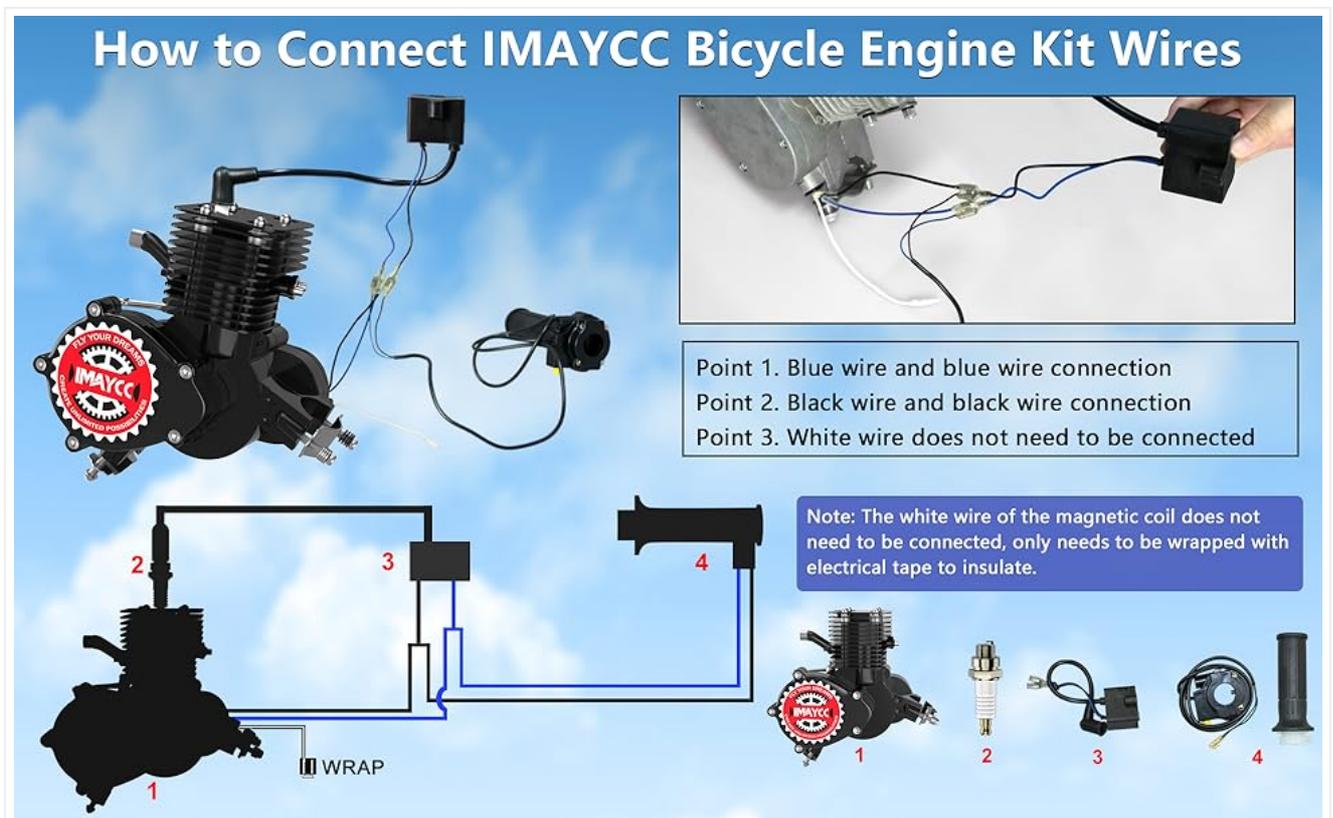


Figure 4.2: Electrical wiring diagram for the engine kit.

Connect the CDI ignition unit and kill switch according to the wiring diagram.

- Blue wire and blue wire connection.
- Black wire and black wire connection.
- The white wire from the magnetic coil does not need to be connected; insulate it with electrical tape.

7. **Final Checks:** Before attempting to start the engine, double-check all connections, fasteners, and cable routings. Ensure no parts interfere with the bicycle's normal operation.

## 5. OPERATING INSTRUCTIONS

### 5.1 Fuel Preparation

The engine is a 2-stroke type and requires a specific mixture of gasoline and 2-stroke engine oil. Use 90# (or higher octane) gasoline.

- **New Equipment (First 500km / Run-in Period):** Mix fuel and engine oil at a ratio of **16:1** (16 parts gasoline to 1 part oil).
- **After Run-in Period (After 500km):** Mix fuel and engine oil at a ratio of **20:1** (20 parts gasoline to 1 part oil).

Mix the fuel and oil thoroughly in a separate container before adding it to the fuel tank. Always ensure the fuel tank switch is in the "ON" (DOWN) position for operation and "OFF" (UP) for parking.

### 5.2 Starting the Engine

The engine uses a foot pedal starting method.

1. Ensure the fuel valve is open.
2. Engage the clutch by holding the clutch lever.
3. Pedal the bicycle to gain some speed (approximately 5-10 mph).
4. Release the clutch lever smoothly while simultaneously applying a small amount of throttle. The engine should

engage and start.

5. If the engine does not start, repeat the process. Avoid excessive throttle when starting.

### 5.3 Driving Guidelines

- **Speed:** The engine provides a comfortable cruising speed of 35-40 km/h (22-25 mph) on smooth roads. The maximum speed limit is approximately 50 km/h (31 mph).
- **Fuel Consumption:** Expect a fuel consumption rate of approximately 2.5L per 100km (94 MPG).
- **Safety:** Always observe traffic laws, wear a helmet, and be aware of your surroundings.

## 6. MAINTENANCE

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Regular maintenance is crucial for the longevity and safe operation of your motorized bicycle. Perform these checks periodically.



Figure 6.1: Regular maintenance helps ensure optimal performance.

- **Chain Tension:** Regularly check and adjust the chain tensioner. A loose chain can cause issues and potential damage.
- **Fasteners:** Due to engine vibration, all nuts and bolts should be checked periodically for tightness. Applying threadlocker (Loctite) to critical fasteners during assembly is highly recommended.
- **Spark Plug:** Inspect the spark plug for fouling or wear. Replace as needed. A fouled spark plug can lead to starting difficulties and poor engine performance.
- **Fuel System:** Inspect fuel lines and connections for leaks. Ensure the fuel filter is clean. Address any fuel leaks immediately.
- **Carburetor:** Periodically check the carburetor for proper function and cleanliness.
- **Magneto:** In wet conditions, ensure the magneto cover is sealed to prevent water ingress, which can cause starting issues.
- **General Cleaning:** Keep the engine and surrounding components clean from dirt and debris.

## 7. TROUBLESHOOTING

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This section addresses common issues you might encounter. For problems not listed here, please contact customer support.

Problem	Possible Cause	Solution
Engine does not start	No fuel, incorrect fuel mix, fouled spark plug, no spark, carburetor issues, magneto waterlogged.	Check fuel level and mix. Inspect spark plug for spark and cleanliness. Clean or adjust carburetor. Ensure magneto is dry and sealed.
Engine runs poorly / Lacks power	Incorrect fuel mix, clogged fuel filter, dirty carburetor, exhaust restriction, improper chain tension.	Verify fuel mix. Clean fuel filter. Clean carburetor. Check exhaust for blockages. Adjust chain tension.
Excessive vibration	Loose engine mounts, unbalanced crankshaft (less common for new kits).	Check and tighten all engine mounting bolts. If vibration persists after ensuring all fasteners are tight, contact support.
Fuel leaks	Loose fuel line connections, damaged fuel tank, faulty fuel valve.	Inspect all fuel lines and connections; tighten or replace as necessary. Check fuel tank for cracks. Ensure fuel valve is functioning correctly.
Chain comes off or breaks	Improper chain tension, worn sprocket, misaligned components.	Adjust chain tensioner. Inspect sprocket for wear. Ensure engine and rear wheel are properly aligned.

## 8. SPECIFICATIONS

Key technical specifications for the IMAYCC 100cc 2-Stroke Bicycle Engine Kit.

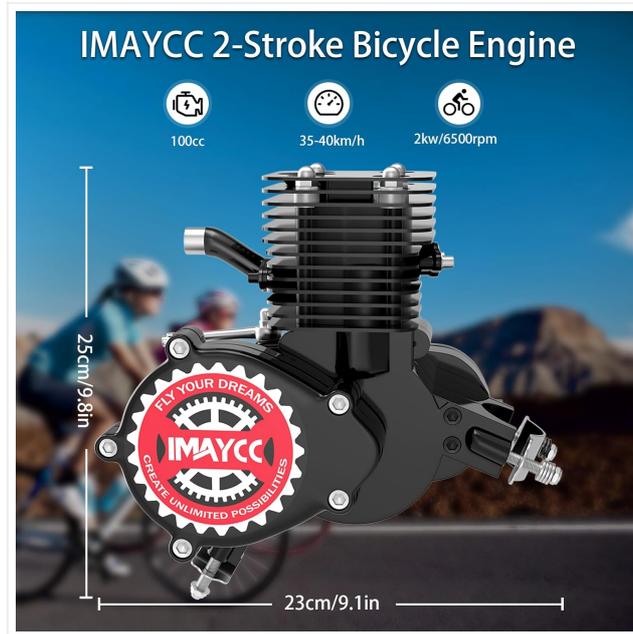


Figure 8.1: Engine dimensions (Height: 25cm/9.8in, Length: 23cm/9.1in).

Feature	Detail
Engine Type	Single-cylinder, Air-cooled, 2-Stroke Gasoline Engine
Displacement	100cc
Engine Power/Speed	2kw / 6500rpm
Starting Method	Foot Pedal Starting

Feature	Detail
Ignition Method	CDI Ignition
Fuel Tank Capacity	3 Liters
Fuel Type	90# (or higher octane) Gasoline
Fuel/Oil Mixing Ratio (New)	16:1 (Gasoline:2-Stroke Oil)
Fuel/Oil Mixing Ratio (After Run-in)	20:1 (Gasoline:2-Stroke Oil)
Sprocket Teeth Count	44 teeth
Chain Type	415 Heavy Duty Chain
Chain Length	110 knots
Compatible Wheel Size	26-28 inches
Product Dimensions	17.6 x 8.2 x 17.6 inches
Item Weight	26.46 Pounds

## 9. WARRANTY AND SUPPORT

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### 9.1 Warranty Information

IMAYCC provides a one-year warranty for quality-related issues. This includes long-term guidance or free replacement of new products if a quality problem arises within the warranty period.

### 9.2 Customer Support

For any product support or inquiries, please utilize the 'Contact Seller' option available in your Amazon order details. Our support team is available to assist you with any questions or issues you may encounter.



Figure 9.1: How to access customer support via Amazon.

