

uYGExN uYGExN168

uYGExN CG250 250cc 167FMM Air-Cooled Motorcycle Crankshaft Instruction Manual

Model: uYGExN168

1. PRODUCT OVERVIEW

This manual provides essential information for the proper installation, operation, and maintenance of the uYGExN CG250 250cc 167FMM Air-Cooled Motorcycle Crankshaft. This crankshaft is designed for 4-stroke CG250 engines, specifically the 250cc 167FMM model, commonly found in dirt bikes, ATVs, and quads. The crankshaft is a critical component of your engine, converting the reciprocating motion of the pistons into rotational motion to power your vehicle. Proper installation and maintenance are crucial for engine performance and longevity.



Figure 1: General view of the uYGEExN CG250 250cc 167FMM Air-Cooled Motorcycle Crankshaft.

2. SAFETY INFORMATION

Always prioritize safety when working with engine components. Improper installation or handling can lead to serious injury or engine damage.

- **Professional Installation Recommended:** Due to the complexity and precision required, professional installation by a qualified mechanic is highly recommended.

- **Wear Protective Gear:** Always wear appropriate personal protective equipment (PPE), including safety glasses and gloves, when handling engine parts.
- **Consult Service Manual:** Refer to your vehicle's specific service manual for detailed engine disassembly and assembly procedures. This manual provides general guidelines for the crankshaft component.
- **Engine Cool Down:** Ensure the engine is completely cool before beginning any work.
- **Disconnect Battery:** Disconnect the battery to prevent accidental starting or electrical shorts.

3. INSTALLATION (SETUP)

Installing a crankshaft requires specialized tools and expertise. The following steps are a general overview and should be supplemented by your vehicle's specific service manual.

1. Engine Disassembly:

Carefully disassemble the engine, following the manufacturer's service manual. This typically involves removing the cylinder head, cylinder, piston, and splitting the crankcase to access the old crankshaft.

2. Inspection and Cleaning:

Thoroughly clean all crankcase halves and inspect for any damage, cracks, or wear. Ensure all oil passages are clear. Inspect new crankshaft for any shipping damage.



Figure 2: Close-up view of the crankshaft bearing and spline, critical areas for proper installation.

3. Crankshaft Installation:

Install new crankshaft bearings (if applicable and recommended by your service manual) into the crankcase halves. Carefully position the new uYGE_xN crankshaft into one half of the crankcase. Ensure

proper alignment and seating.

4. Crankcase Assembly:

Apply a thin, even coat of liquid gasket sealant to the mating surfaces of the crankcase halves. Carefully join the crankcase halves, ensuring the crankshaft rotates freely without binding. Install and torque all crankcase bolts to the specifications provided in your vehicle's service manual. **Do not overtighten.**

5. Engine Reassembly:

Reassemble the engine components (piston, cylinder, cylinder head, etc.) in reverse order of disassembly, adhering strictly to torque specifications and procedures outlined in your vehicle's service manual. Pay close attention to timing chain/gear installation and valve timing.



Figure 3: Detail of the crankshaft gear, essential for engine timing.

6. Fluid Refill:

Refill the engine with the correct type and amount of engine oil as specified by your vehicle manufacturer.

4. OPERATION CONSIDERATIONS

Once the crankshaft is installed and the engine reassembled, proper operational practices are essential for its longevity and performance.

- **Engine Break-in:** Follow your vehicle manufacturer's recommended engine break-in procedure after a major engine component replacement. This typically involves varying engine speeds and avoiding

prolonged high-RPM operation for the initial hours of use.

- **Oil Pressure Check:** After starting the engine for the first time, immediately check for proper oil pressure. Shut off the engine if oil pressure is not indicated.
- **Listen for Unusual Noises:** Pay close attention to any unusual noises (knocking, grinding, excessive vibration) during initial operation. Shut down the engine immediately if such noises occur.
- **Regular Oil Changes:** Adhere to the recommended oil change intervals and use the specified oil type to ensure adequate lubrication for the crankshaft and other engine components.

5. MAINTENANCE

Regular maintenance is key to extending the life of your engine and its crankshaft.

- **Oil Quality and Level:** Regularly check engine oil level and ensure it is within the recommended range. Use high-quality engine oil suitable for your engine type and operating conditions.
- **Oil Filter Replacement:** Replace the oil filter with every oil change to ensure clean oil circulation.
- **Engine Cleanliness:** Keep the engine exterior clean to prevent dirt and debris from entering critical areas.
- **Avoid Over-revving:** Excessive engine RPMs can put undue stress on the crankshaft and connecting rod.
- **Timely Repairs:** Address any engine issues promptly to prevent secondary damage to the crankshaft or other components.

6. TROUBLESHOOTING

If you experience issues after crankshaft installation, consider the following common problems:

- **Engine Knocking/Rattling:**

Possible Causes: Incorrect bearing clearances, loose connecting rod bolts, damaged crankshaft, improper oil pressure, or foreign material in the engine.

Action: Immediately shut down the engine. Consult a professional mechanic. Do not operate the engine with knocking noises.

- **Low Oil Pressure:**

Possible Causes: Incorrect oil level, wrong oil viscosity, faulty oil pump, clogged oil passages, or excessive bearing clearances.

Action: Check oil level and type. If problem persists, professional diagnosis is required.

- **Engine Seizure:**

Possible Causes: Severe lack of lubrication, overheating, or catastrophic component failure.

Action: This indicates major engine damage. Professional inspection and repair are necessary.

- **Excessive Vibration:**

Possible Causes: Unbalanced crankshaft, bent connecting rod, or other rotating assembly issues.

Action: Seek professional diagnosis. Continued operation with excessive vibration can cause further damage.

7. SPECIFICATIONS

The uYGE_xN CG250 250cc 167FMM Air-Cooled Motorcycle Crankshaft is designed to meet the following specifications:

Feature	Specification
Engine Type Compatibility	Air-cooled 4-stroke CG250 engine, 250cc, 167FMM
Crankshaft Length	228mm (as per product description)
Overall Length (approx.)	235mm (refer to Figure 4)
Shaft Diameter (ends, approx.)	72mm (refer to Figure 4)
Connecting Rod Width (approx.)	16mm (refer to Figure 4)
Model Number	uYGExN168
Item Weight	14.1 ounces
Manufacturer	uYGExN



Figure 4: Dimensional diagram of the crankshaft, showing key measurements including overall length (235mm), shaft diameters (72mm), and connecting rod width (16mm).

8. CONTACT AND SUPPORT

For further assistance, technical support, or warranty inquiries regarding your uYGExN crankshaft, please contact your retailer or the manufacturer directly.

Note: Always refer to your vehicle's specific service manual for detailed engine repair and maintenance procedures.