

# **Complete Engine Overhaul Rebuild Kit User Manual**

## **1. Product Overview**

### **Product Name**

**Complete Engine Rebuild Kit (Crankshaft + Connecting Rods + Pistons + Piston Rings + Main Bearings + Con Rod Bearings + Thrust Washers)**

### **Application**

**Aftermarket replacement kit for engines, direct OEM replacement without modification.**

## **2. Parts List & Function Introduction**

### **Crankshaft**

**Undergoes strict dynamic balance testing. Converts reciprocating piston movement into rotational power output, high wear resistance, reduces engine shaking and abnormal noise.**

### **Connecting Rods**

**Connect pistons and crankshaft to transmit combustion pressure. Precision machining with tight dimensional tolerance, anti-tensile and anti-compressive deformation.**

### **Pistons & Piston Rings Set**

**Lightweight design with excellent heat dissipation. Matched**

**piston rings (top compression ring, second compression ring, oil control ring) seal cylinder pressure, prevent oil burning and gas blow-by, scrape excess oil off cylinder walls.**

### **Main Bearing**

**Installed on crankshaft main journals. Soft friction surface reduces friction between crankshaft and engine block, buffers impact loads to protect crankshaft.**

### **Connecting Rod Bearing**

**Fitted on the big end of connecting rods. Isolate metal direct contact between crank pin and connecting rod, lower wear and running noise.**

### **Thrust Washers**

**Control crankshaft axial clearance, restrict front-back crankshaft movement, avoid axial abrasion and crankshaft damage.**

## **3. Product Advantages**

**All-in-one matched kit: All required overhaul parts included in one package, save separate purchasing time and matching trouble.**

**OEM standard dimension: Strictly follow original factory size standards, plug-and-play replacement, no cutting or grinding needed.**

**Long service life, stable performance for long-term driving.**

**Precision CNC manufacturing: Every component processed by digital machine tools, surface anti-rust & anti-corrosion treatment.**

**100% full inspection: All parts pass dimension, hardness and wear-resistance test before shipment.**

#### **4. Professional Installation Instructions**

**Thoroughly clean engine block, crankshaft journals and connecting rod holes before assembly. Remove carbon deposits, metal scraps and old oil sludge completely.**

**Coat clean engine oil evenly on all friction surfaces: bearing shells, piston rings, piston pins and crankshaft journals for lubrication during installation.**

**Mount piston rings in specified order, stagger the ring gaps evenly. Never align all ring gaps on one straight line to avoid gas leakage.**

**Tighten main bearing bolts and connecting rod bolts step by step according to factory torque specifications. Do not over-tighten or under-tighten the bolts.**

**After assembly, check crankshaft axial clearance with thrust washers to ensure clearance meets the engine's standard range.**

**Confirm engine model and OEM part number compatibility before installation. This kit only fits matched engines.**

**Finish assembly and start engine idle running for 15–20 minutes first. Gradually add load for running-in. Replace engine oil after the break-in period is finished.**

## **5. Compatibility Notice**

**Confirm your engine model, displacement and original OEM part number before placing an order.**

**All items are aftermarket replacement spare parts.**

## **6. Storage & Warranty Policy**

### **Storage Requirements**

**Store all parts in dry and ventilated environment. Keep away from moisture, rust, heavy collision and extrusion. Do not scratch the friction surface of bearing shells.**

### **Warranty Terms**

**12-month warranty under correct installation and normal driving use. Warranty becomes invalid for damage caused by improper installation, insufficient lubrication, overspeeding, overloading or engine water ingress.**

## **7. Package Description**

**Each component packed with separate neutral anti-rust packaging. Outer carton with shockproof protection, suitable**

**for long-distance cross-border logistics transport.**