

## unbrand 3TN66C

# Yanmar 3TN66C 3TN66L 3TN66E Engine Overhaul Rebuild Kit Instruction Manual

For Yanmar VIO10 and SV13 Excavators



## 1. INTRODUCTION

This manual provides essential information for the installation and maintenance of the unbrand 3TN66C, 3TN66L, 3TN66E Engine Overhaul Rebuild Kit. This kit is designed to restore the performance and longevity of Yanmar 3TN66C, 3TN66L, and 3TN66E engines found in VIO10 and SV13 excavators. Proper installation and adherence to maintenance guidelines are crucial for optimal engine function and durability.

It is recommended that installation be performed by a qualified mechanic with experience in engine rebuilding to ensure correct assembly and function.

## 2. PRODUCT CONTENTS

The 3TN66C 3TN66L 3TN66E Overhaul Rebuild Kit includes the following components:

- 1 set Full Gasket Kit
- 3 pcs Liner Cylinder/Sleeve
- 3 pcs Piston, STD size
- 3 pcs Piston Pin
- 3 set Ring set for 3 pistons, STD size
- 6 pcs Pin Clips
- 6 pcs Valves (3 pcs Intake Valves + 3 pcs Exhaust Valves)
- 6 pcs Valve Guides
- 6 pcs Valve Seats (3 pcs Intake Valve Seats + 3 pcs Exhaust Valve Seats)
- 1 set Crankshaft Bearing, STD size
- 1 set Connect Rod Bearing, STD size
- 1 set Crankshaft Thrust Washer

*Note: This kit is supplied with STD (Standard) size bearings. If oversized bearings are required, please ensure to specify this requirement at the time of order.*



Image: Overview of the complete engine overhaul rebuild kit, showing all included components such as pistons, liners, valves, gaskets, bearings, and rings.

### 3. SETUP AND INSTALLATION

The installation of an engine overhaul rebuild kit requires specialized tools and technical expertise. It is strongly recommended that this procedure be carried out by a certified mechanic or an experienced engine technician.

### General Installation Steps (Consult Service Manual for Specifics):

1. **Engine Disassembly:** Carefully disassemble the engine, documenting the position and condition of all components.
2. **Cleaning and Inspection:** Thoroughly clean all engine components. Inspect the engine block, cylinder head, crankshaft, and connecting rods for wear, cracks, or damage. Machine work may be required.
3. **Component Replacement:** Replace worn components with the new parts from the rebuild kit. This includes cylinder liners, pistons, piston rings, piston pins, valves, valve guides, valve seats, crankshaft bearings, connecting rod bearings, and thrust washers.
4. **Gasket Installation:** Install the new full gasket kit, ensuring all sealing surfaces are clean and dry. Use appropriate sealants where specified by the engine manufacturer.
5. **Engine Assembly:** Reassemble the engine according to the manufacturer's specifications, paying close attention to torque values for all fasteners. Ensure proper clearances for all moving parts.
6. **Timing:** Set the engine timing correctly after installing the crankshaft and camshaft components.
7. **Fluid Filling:** Fill the engine with new engine oil, coolant, and other necessary fluids.
8. **Initial Start-up and Break-in:** Follow the engine manufacturer's recommended break-in procedure for a newly rebuilt engine.

Always refer to the specific Yanmar service manual for the 3TN66C, 3TN66L, or 3TN66E engine for detailed, step-

by-step instructions, torque specifications, and critical clearances.

## 4. OPERATING CONSIDERATIONS AFTER REBUILD

- After a complete engine overhaul, proper operating procedures are essential for the longevity of the rebuilt engine.
- **Break-in Period:** Adhere strictly to the engine manufacturer's recommended break-in period. This typically involves operating the engine under varying loads, avoiding prolonged idling, and refraining from heavy loads or high RPMs for a specified number of hours.
  - **Initial Oil Change:** Perform an oil and filter change after the initial break-in period (e.g., 20-50 hours of operation) to remove any assembly lubricants or wear particles.
  - **Monitor Engine Performance:** Pay close attention to oil pressure, coolant temperature, and any unusual noises or vibrations during the first few hours of operation.

## 5. MAINTENANCE

- Regular maintenance is critical for the performance and lifespan of your Yanmar engine after a rebuild.
- **Oil and Filter Changes:** Follow the manufacturer's recommended intervals for engine oil and filter replacement. Use only specified oil types and filters.
  - **Coolant System:** Regularly check coolant levels and condition. Flush and replace coolant according to the manufacturer's schedule.
  - **Air Filter:** Inspect and replace the air filter as needed to ensure clean air intake.
  - **Fuel System:** Maintain the fuel system, including fuel filter replacement, to prevent contamination.
  - **Valve Clearances:** Check and adjust valve clearances at recommended intervals.
  - **General Inspection:** Periodically inspect for leaks, loose connections, and unusual wear.

## 6. TROUBLESHOOTING

- If you encounter issues after rebuilding your engine, consider the following general troubleshooting steps. Always consult a professional mechanic for complex problems.
- **No Start/Hard Start:** Check fuel supply, battery charge, starter motor, and ignition system. Verify engine timing.
  - **Low Oil Pressure:** Check oil level, oil pump function, and ensure correct bearing clearances.
  - **Overheating:** Inspect coolant level, radiator, thermostat, water pump, and cooling fan. Check for air in the cooling system.
  - **Excessive Smoke:** Identify smoke color (blue for oil, black for fuel, white for coolant) to diagnose the issue.
  - **Unusual Noises:** Investigate knocking, tapping, or grinding sounds which may indicate internal component issues.

For detailed diagnostic procedures, refer to the official Yanmar service manual for your specific engine model.

## 7. SPECIFICATIONS

Key specifications for the product and related information:

Specification	Detail
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Specification	Detail
Manufacturer	LUQING
Brand	unbrand
Manufacturer Part Number	3TN66C
ASIN	B07FRVHC99
Date First Available	July 22, 2018

## 8. SUPPORT AND CONTACT INFORMATION

For any questions or concerns regarding this overhaul rebuild kit, please contact the seller directly. We aim to respond to all inquiries within 24 hours.

This kit is designed for standard size bearings. If you require oversized bearings, please communicate this requirement when placing your order.

Shipping is typically handled via Fedex, DHL, or UPS. If you have specific shipping requirements, please provide a message with your order.

