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> Enginetech Engine Rebuild Overhaul Kit for 2003-2008 Dodge 5.7L V8 HEMI Engines (Model RRCCR345BP)

## Enginetech RRCCR345BP

# Enginetech Engine Rebuild Overhaul Kit

**Model:** RRCCR345BP | **For:** 2003-2008 Dodge 5.7L V8 HEMI Engines

## INTRODUCTION

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This Enginetech Engine Rebuild Overhaul Kit is designed for comprehensive engine restoration of 2003-2008 Dodge 5.7L V8 HEMI engines. This kit provides high-quality components manufactured to industry standards (ISO, QS & TS quality systems) to ensure durability and performance.

## Compatibility

This kit is compatible with 2003-2008 Dodge 5.7L V8 HEMI engines found in models such as Ram, Durango, Charger, Magnum, 300, and Challenger.

## PRODUCT COMPONENTS

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The Enginetech Engine Rebuild Overhaul Kit includes the following essential components:

- **Full Gasket Set:** Comprehensive set of gaskets for sealing engine components.
- **Dome-Top Pistons:** Designed for optimal combustion and engine performance.
- **Premium Piston Rings:** Ensures proper cylinder sealing and oil control.
- **Main, Rod, and Cam Bearings:** Critical for crankshaft and camshaft rotation.
- **4-Piece Timing Set:** Includes components for precise engine timing.
- **Oil Pump:** Essential for maintaining proper engine lubrication.
- **Freeze Plugs:** Protects the engine block from damage due to freezing coolant.
- **Thrust Washer:** Manages crankshaft end play.
- **Valve Stem Seals:** Prevents oil leakage past valve stems.



**Image:** Head Gasket Set (CR345HS-B).

This image displays the head gaskets and intake manifold gaskets included in the kit.



**Image:** Lower Gasket Set (CR345CS-A). This image shows the oil pan gasket, rear main seal, and timing cover gasket.



**Image:** Dome-Top Piston (P5011). A single piston is shown, representative of the set included in the kit.



**Image:** Oil Pump (EPK127). This is the oil pump component, crucial for engine lubrication.



**Image:** 4-Piece Timing Set (TS704). This image displays the timing chain, sprockets, and tensioners.



**Image:** Main and Rod Bearings (BB111J). A selection of engine bearings is shown, vital for crankshaft and connecting rod movement.

## SETUP AND INSTALLATION GUIDELINES

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Engine rebuilding requires specialized knowledge and tools. It is recommended that installation be performed by a qualified professional. Always refer to the vehicle's specific service manual for detailed, step-by-step instructions, torque specifications, and safety procedures.

### Pre-Installation Checks

- **Component Verification:** Before beginning, carefully inspect all components in the kit against the packing list to ensure all parts are present and undamaged.
- **Size Confirmation:** Verify that the piston, piston ring, and bearing sizes (STD, 010, 020, 030) match your engine's requirements. Incorrect sizes can lead to severe engine damage.
- **Cleanliness:** Ensure all engine surfaces, especially gasket mating surfaces and bearing journals, are thoroughly cleaned and free of debris, old gasket material, and oil.

### General Installation Steps (Summary)

1. Prepare the engine block and cylinder heads by cleaning and inspecting for wear or damage.
2. Install the main and rod bearings, ensuring proper alignment and lubrication.
3. Assemble pistons with new rings and install them into the cylinders.
4. Install the camshaft and associated components, including cam bearings.
5. Install the timing set, ensuring correct timing marks alignment.
6. Install the oil pump and pickup tube.
7. Install the full gasket set, including head gaskets, intake manifold gaskets, and valve cover gaskets, following manufacturer's torque specifications.
8. Install valve stem seals and reassemble cylinder heads.

9. Complete engine assembly, ensuring all fasteners are torqued to specifications.

## OPERATING INFORMATION

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After a complete engine rebuild, proper break-in procedures are crucial for the longevity and performance of the engine. Consult your vehicle's service manual or a reputable engine builder for specific break-in recommendations.

### Initial Start-Up

- Ensure the engine has adequate oil and coolant levels.
- Prime the oil system to ensure oil pressure is established before cranking.
- Monitor oil pressure, coolant temperature, and any unusual noises during the initial start-up.

### Break-In Period

- Avoid sustained high RPMs or heavy loads for the first few hundred miles.
- Vary engine speed during driving to properly seat piston rings.
- Perform an initial oil and filter change after the recommended break-in mileage.

## MAINTENANCE

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Regular maintenance is vital for the continued performance and reliability of your rebuilt engine.

- **Oil Changes:** Adhere to the manufacturer's recommended oil change intervals using the specified oil type and viscosity.
- **Coolant System:** Regularly check coolant levels and condition. Ensure the cooling system is free of leaks and properly maintained.
- **Filter Replacement:** Replace oil, air, and fuel filters according to the vehicle's maintenance schedule.
- **Inspection:** Periodically inspect for fluid leaks, unusual noises, or performance changes.

## TROUBLESHOOTING

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If you encounter issues after installing the rebuild kit, consider the following general troubleshooting steps. For complex problems, professional diagnosis is recommended.

- **Low Oil Pressure:** Check oil level, oil pump function, and ensure no blockages in oil passages. Verify bearing clearances.
- **Overheating:** Inspect coolant levels, thermostat operation, radiator, and water pump. Check for proper head gasket sealing.
- **Unusual Noises (Knocking/Tapping):** Could indicate incorrect bearing clearances, lifter issues, or improper assembly.
- **Smoke from Exhaust:** Blue smoke often indicates oil burning (e.g., piston rings, valve stem seals). White smoke can indicate coolant burning (e.g., head gasket).
- **Loss of Power/Misfires:** Check engine timing, compression, fuel delivery, and ignition system.

*Note: If any issues arise, especially immediately after installation, it is crucial to stop the engine and investigate to prevent further damage. Contact a qualified mechanic or the product supplier for assistance.*

## SPECIFICATIONS

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This kit offers various sizing options to accommodate different engine rebuilding needs.

- **Pistons & Piston Rings:** Standard (STD), 0.020 inch (020), 0.030 inch (030) overbore.
- **Main & Rod Bearings:** Standard (STD), 0.010 inch (010), 0.020 inch (020), 0.030 inch (030) undersize.

**Important: Please confirm desired sizes (Pistons & Rings, Rod/Main Bearings) when ordering to ensure correct component delivery.**

## WARRANTY AND SUPPORT

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Enginetech is committed to providing quality products. If you receive a part that is a different size than ordered, exchanges can be arranged. For any issues encountered with the kit, please contact the supplier directly with details and a call-back number for prompt resolution.

The manufacturer prides itself on quickly addressing and resolving any potential issues.

## ADDITIONAL RESOURCES

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### Product Videos

**Video:** Fit for MDS 2003-2008 Dodge 5.7L Cam Kit. This video provides a visual overview of the components included in the MDS-compatible cam kit.

**Video:** Non MDS 5.7 HEMI Lifters Camshaft Oil Pan Kit. This video showcases the components of the non-MDS lifters, camshaft, and oil pan kit.