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› Mould King 10205 V12 Engine Model Building Blocks Set Instruction Manual

## Mould King 10205

# Mould King 10205 V12 Engine Model Building Blocks Set

Instruction Manual

## 1. INTRODUCTION

This manual provides detailed instructions for assembling and operating your Mould King 10205 V12 Engine Model Building Blocks Set. This set allows you to construct a functional V12 engine model, designed to demonstrate mechanical principles through an electrically driven mechanism. It is an engaging STEM toy intended for enthusiasts aged 14 and above, promoting skills in hand-eye coordination, problem-solving, and creative thinking.

## 2. SAFETY INFORMATION

- **Age Recommendation:** This product contains small parts and is recommended for individuals aged 14 years and older. Keep out of reach of younger children to prevent choking hazards.
- **Battery Safety:** The model requires 6 AAA batteries (not included). Ensure batteries are inserted with correct polarity. Do not mix old and new batteries, or different types of batteries. Remove batteries if the model will not be used for an extended period. Do not attempt to recharge non-rechargeable batteries.
- **Assembly:** Follow all assembly steps carefully. Do not force parts together. If a part does not fit, recheck the instructions.
- **Electrical Components:** Handle the motor and battery box with care. Do not expose to water or extreme temperatures.

## 3. PACKAGE CONTENTS

Before beginning assembly, verify that all components are present. The Mould King 10205 V12 Engine Model set includes:

- 733+ Building Block Pieces (various shapes, sizes, and colors: Grey, Silver, Black)
- 1 x M Motor
- 1 x Battery Box (requires 6 AAA batteries, not included)
- 1 x Instruction Manual (this document)

If any parts are missing, please refer to the 'Warranty and Support' section for assistance.

## 4. ASSEMBLY INSTRUCTIONS

Follow the step-by-step visual instructions provided in the included printed manual to construct your V12 engine model. The assembly process involves connecting various building blocks to form the engine's structure, internal mechanisms, and external details.

### 4.1 General Assembly Tips

- Organize your pieces before starting.
- Pay close attention to the orientation of each piece as shown in the diagrams.
- Ensure all connections are firm but do not apply excessive force.
- Test moving parts periodically during assembly to ensure smooth operation.

### 4.2 Key Assembly Stages

The assembly will guide you through building the core engine block, crankshaft, pistons, exhaust manifolds, and the transmission system. The motor and battery box are integrated into the base of the model.



Figure 4.1: An overview of the fully assembled Mould King 10205 V12 Engine Model.

# ELECTRIC DRIVE, 1:1 REPRODUCTION OF DYNAMIC PRINCIPLES

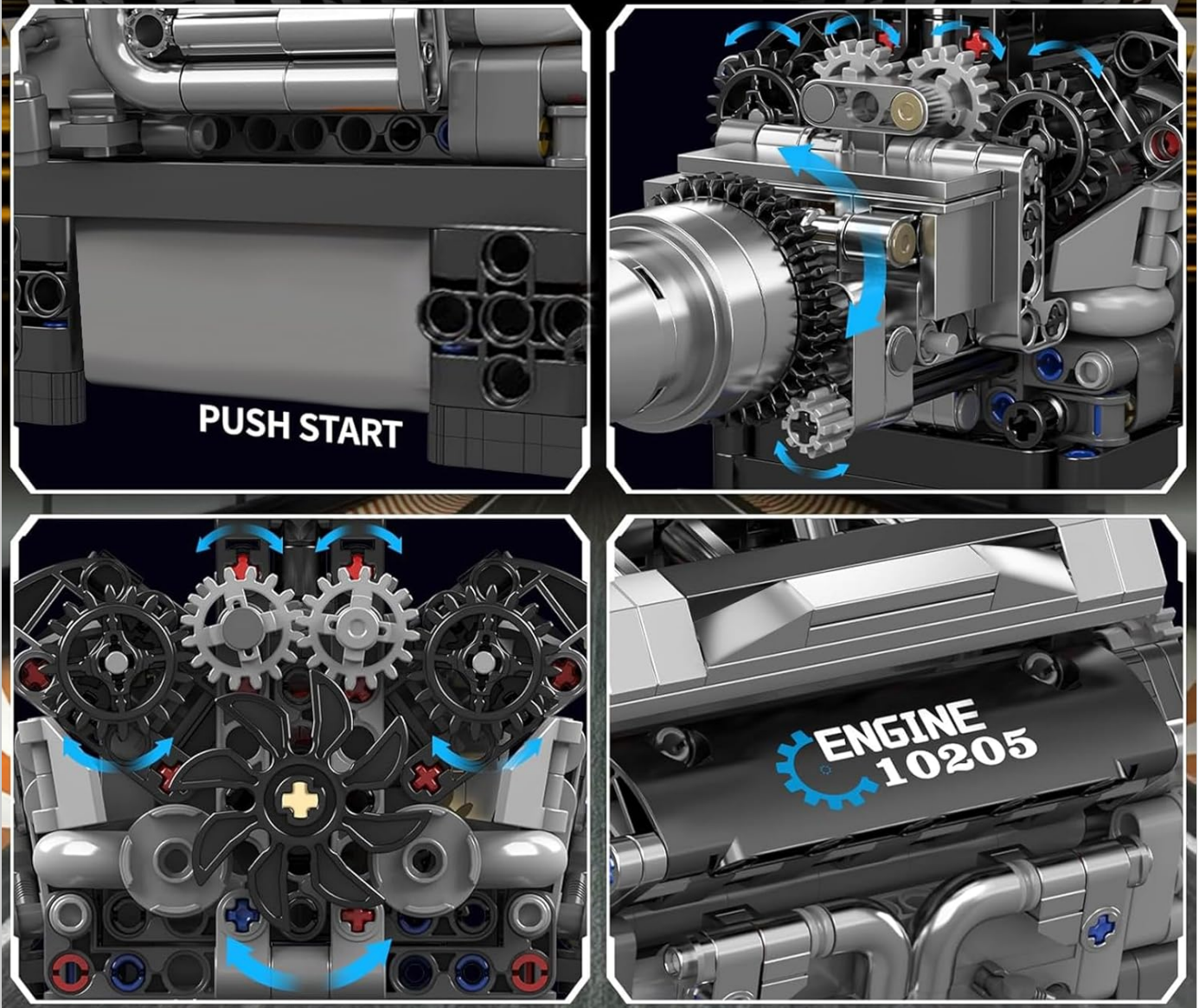


Figure 4.2: Detailed view of the internal gear system and dynamic principles of the engine model.

## 4.3 Video Assembly Guide

For a visual guide to the assembly process and demonstration of the engine's functionality, please refer to the official product video below.

Your browser does not support the video tag.

Video 4.1: Official Mould King video demonstrating the assembly and operation of the Mini Engine Building Blocks Set.

## 5. SETUP

### 5.1 Battery Installation

The V12 Engine Model requires 6 AAA batteries to power its electrical functions. These batteries are not included in the set.

1. Locate the battery box integrated into the base of the assembled engine model.

2. Carefully open the battery compartment cover.
3. Insert 6 new AAA batteries, ensuring the correct positive (+) and negative (-) polarity as indicated inside the compartment.
4. Close the battery compartment cover securely.

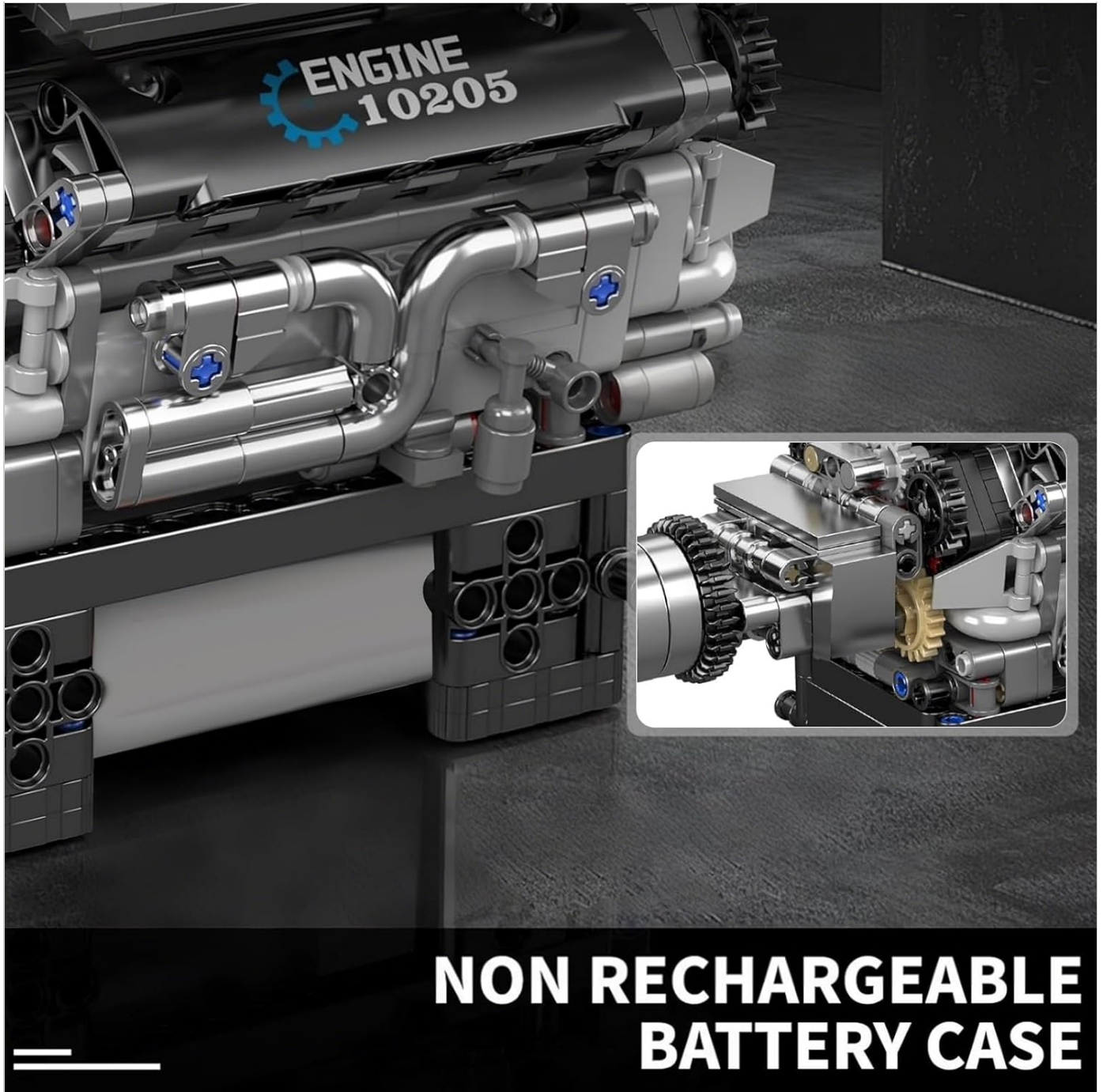


Figure 5.1: Detail of the battery case, where 6 AAA batteries are to be installed.

## 6. OPERATING INSTRUCTIONS

Once assembled and batteries are installed, your V12 engine model is ready for operation.

1. Ensure the model is placed on a stable, flat surface.
2. Locate the power switch on the battery box.
3. Slide the switch to the 'ON' position. The M motor will activate, causing the internal gears and pistons to move, simulating a running V12 engine.

4. To stop the engine, slide the power switch to the 'OFF' position.
5. The model features a reverse rotation button. Pressing this button will change the direction of the engine's rotation, demonstrating different mechanical movements.

## 7. MAINTENANCE

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- **Cleaning:** Use a soft, dry cloth to gently wipe dust from the model. Avoid using water or cleaning solutions, as these can damage the electrical components or plastic.
- **Storage:** Store the model in a cool, dry place away from direct sunlight and extreme temperatures. If storing for an extended period, remove the batteries from the battery box.
- **Inspection:** Periodically check for any loose or damaged parts. Reattach or replace as necessary.

## 8. TROUBLESHOOTING

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Problem	Possible Cause	Solution
Engine does not run when switched on.	<ul style="list-style-type: none"> <li>• Batteries are not installed or are depleted.</li> <li>• Batteries are installed with incorrect polarity.</li> <li>• Motor or wiring connection is loose.</li> </ul>	<ul style="list-style-type: none"> <li>• Install new AAA batteries or replace depleted ones.</li> <li>• Check battery polarity and reinsert correctly.</li> <li>• Inspect all connections to the motor and battery box to ensure they are secure.</li> </ul>
Engine runs slowly or inconsistently.	<ul style="list-style-type: none"> <li>• Batteries are low.</li> <li>• Friction in moving parts due to incorrect assembly.</li> </ul>	<ul style="list-style-type: none"> <li>• Replace with fresh AAA batteries.</li> <li>• Review assembly steps, especially for gears and pistons, to ensure smooth movement and no binding.</li> </ul>
Missing or damaged parts.	Manufacturing defect or loss during unpacking/assembly.	Contact Mould King customer support as detailed in the 'Warranty and Support' section.

## 9. SPECIFICATIONS

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**Brand Name:** Mould King

**Model Name:** RR Car V12 Engine

**Model Number:** MK10205

**Manufacturer Part Number:** 10205

**Number of Pieces:** 733

**Material Type:** Plastic

**Color:** Grey, Silver, Black

**Item Dimensions:** 4.17 x 5.79 x 10.24 inches

**Manufacturer Minimum Age:** 14 years (168 months)

**Educational Objective:** Creative Thinking

**Operation Mode:** Automatic

**Power Source:** Battery

**Supported Battery Types:** 6 AAA batteries (not included)

**GTIN:** 705736911452

## 10. WARRANTY AND SUPPORT

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Mould King products are manufactured to high standards. In the unlikely event that you encounter any issues or find missing pieces, please contact Mould King customer support directly. You can typically find contact information on the product packaging or through the retailer where the product was purchased. Please provide your model number (10205) and a detailed description of the issue for prompt assistance.

