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> [LEGO TECHNIC 42009 Mobile Crane MK II Instruction Manual](#)

## LEGO 42009

# LEGO TECHNIC 42009 Mobile Crane MK II Instruction Manual

Model: 42009 | Brand: LEGO

## INTRODUCTION

This manual provides detailed instructions for the assembly, operation, and maintenance of the LEGO TECHNIC 42009 Mobile Crane MK II. This advanced 2-in-1 model offers a complex building experience and features motorized functions. The set allows for the construction of a highly detailed mobile crane or a container stacker and truck.



Image 1: The LEGO TECHNIC 42009 Mobile Crane MK II in its fully assembled state, showcasing its extended crane arm and detailed structure.

## KEY FEATURES

The LEGO TECHNIC 42009 Mobile Crane MK II is designed with numerous functional elements for an authentic building and play experience:

- **2-in-1 Model:** Rebuilds into a container stacker and truck, offering versatile construction options.
- **LEGO Power Functions:** Includes an 8882 XL-Motor and an 8881 Battery Box for motorized operations.
- **Motorized Functions:** Features power-driven extending outriggers, lowering support feet, and an extendable/raisable crane arm with a retractable winch.
- **Detailed Design:** Incorporates a rotating superstructure, 8-wheel drive, 5 axles, 10 wheels, and a detailed V8 engine with moving pistons.
- **Impressive Reach:** The crane arm can extend over 30 inches (77 cm) into the air.



Image 2: The product packaging for the LEGO TECHNIC 42009 Mobile Crane MK II, highlighting its features and piece count.

## ASSEMBLY GUIDE

The LEGO TECHNIC 42009 Mobile Crane MK II is a complex model consisting of 2,606 pieces. Assembly requires careful attention to detail and patience. Refer to the official LEGO instruction booklets for step-by-step guidance.

### Before You Begin

- **Sorting Parts:** It is highly recommended to sort all pieces by type and color before starting. This will significantly facilitate the building process and reduce errors.
- **Power Functions:** This model includes LEGO Power Functions components (XL-Motor 8882 and Battery Box 8881) which are integrated during assembly. Ensure these components are correctly installed as per the instructions.
- **Instruction Booklets:** Follow the sequence provided in the official LEGO instruction booklets precisely. Pay close attention to details such as the orientation of parts and the type of pins used (e.g., friction vs. non-friction).

### Building Stages

The assembly is typically divided into multiple stages, often corresponding to numbered bags of parts. Each stage builds upon the previous one:

1. **Chassis and Steering:** This initial stage focuses on building the robust base structure, the intricate 8-wheel steering mechanism, and the foundational gear systems. Accurate placement of friction pins and axle connectors is crucial for proper steering function.
2. **Outriggers and Power Functions Integration:** Assemble the motorized outriggers. Ensure the Power Functions motor is correctly connected and the gears for extending and lowering the feet are synchronized. Test the outrigger function periodically during this stage to catch any assembly errors early.
3. **Superstructure and Crane Arm:** Construct the rotating superstructure and the multi-stage telescopic crane arm. This section involves intricate gearing for extending and raising the arm, and operating the winch. Precision is key for smooth operation.

Refer to the official LEGO building instructions for detailed visual steps and part identification.

## OPERATING INSTRUCTIONS

The LEGO TECHNIC 42009 Mobile Crane MK II features several motorized functions powered by the integrated LEGO Power Functions system. Familiarize yourself with the controls to operate the crane effectively.

## Powering On

Ensure the 8881 LEGO Power Functions Battery Box is loaded with 6 AA batteries and switched to the ON position before attempting to operate any motorized functions.

## Steering

The model features 8-wheel steering. Manually turn the steering wheel in the cab to control the direction of the front and rear axles. The steering mechanism is designed to provide a perceptibly tighter turning circle.

## Outrigger Deployment

Use the Power Functions controls to extend the outriggers horizontally. Once extended, activate the function to lower the support feet for stability. It is important to note that the outriggers must be extended slightly before the feet can be lowered. Ensure all four feet are synchronized for stable operation.

## Crane Arm Operation

The crane arm can be extended and raised using the Power Functions motor:

- **Raising/Lowering Arm:** Activate the designated Power Functions control to raise or lower the main crane arm.
- **Extending/Retracting Arm:** Use the separate Power Functions control to extend or retract the telescopic sections of the crane arm.
- **Winch Operation:** The working winch allows for lowering and raising the hook. Operate this function carefully to manage loads.

## Superstructure Rotation

The crane's superstructure can be rotated manually to position the arm over the desired lifting area.

## MAINTENANCE AND CARE

Proper maintenance ensures the longevity and functionality of your LEGO TECHNIC model.

### Cleaning

To clean your LEGO model, use a soft, dry cloth to remove dust. For more thorough cleaning, use a mild soap solution and rinse with clear water (not exceeding 40°C / 104°F). Allow parts to air dry completely. Avoid harsh chemicals or abrasive materials, as these can damage the plastic.

### Storage

Store the model in a cool, dry place away from direct sunlight to prevent discoloration or material degradation. Disassemble if necessary for long-term storage to protect intricate mechanisms.

### Battery Replacement

Replace batteries in the 8881 LEGO Power Functions Battery Box when performance diminishes. Always use fresh, high-quality AA batteries. Remove batteries if the model will not be used for an extended period to prevent leakage.

## TROUBLESHOOTING GUIDE

If you encounter issues with your LEGO TECHNIC 42009 Mobile Crane MK II, consult the following troubleshooting steps:

### Motorized Functions Not Working

- **Check Batteries:** Ensure the 8881 Battery Box has fresh AA batteries and is switched ON.
- **Connections:** Verify all Power Functions cables and connectors are securely attached and not loose.
- **Gear Alignment:** Incorrectly assembled gears can cause resistance or prevent movement. Review the assembly steps for the affected function, paying close attention to gear placement and ensuring all gears mesh correctly.
- **Overload/Friction:** The motor may struggle if the mechanism is under excessive load or if there is too much friction in the system. Ensure all moving parts operate smoothly without obstruction.

## Crane Arm or Outriggers Not Moving Smoothly

- **Friction Points:** Check for any parts that are rubbing or misaligned, creating excessive friction. Ensure axles and pins are inserted correctly and not binding.
- **Assembly Errors:** Re-examine the specific sections of the instruction manual related to the problematic function. Small errors in pin or axle placement can significantly impact performance.
- **Synchronization:** For outriggers, ensure the feet are synchronized. If they are out of sync, manually adjust them to the correct position and re-test the function.

## PRODUCT SPECIFICATIONS

Specification	Detail
Product Dimensions (Retracted)	Over 8 inches (20 cm) high, 23 inches (58 cm) long, and 5 inches (13 cm) wide
Item Weight	8.6 pounds (3.9 kg)
Model Number	42009 (Item model number: 6025223)
Manufacturer Recommended Age	11 years and up
Batteries Required	6 AA batteries (for Power Functions)
Number of Pieces	2,606
Rebuild Options	Container Stacker and Truck
Release Date	January 1, 2014
Manufacturer	LEGO

## SAFETY INFORMATION

Please observe the following safety guidelines when handling and operating your LEGO TECHNIC model:

- This LEGO set contains small parts and is not suitable for children under 3 years of age due to choking hazards.
- Adult supervision is recommended during assembly and play, especially for younger builders.
- Do not modify the electrical components of the LEGO Power Functions system.
- Ensure batteries are inserted with correct polarity and do not mix old and new batteries or different types of batteries.

## WARRANTY AND CUSTOMER SUPPORT

For information regarding product warranty, missing parts, or further technical assistance, please visit the official LEGO customer service website or contact their support line. LEGO is committed to providing high-quality products and support.

**LEGO Customer Service:** <https://www.lego.com/service>