

LEGO 42146

LEGO Technic Liebherr Crane LR 13000 (Model 42146) Instruction Manual

Advanced Building Kit with CONTROL+ App Functionality

1. INTRODUCTION

This manual provides detailed instructions for assembling, operating, and maintaining your LEGO Technic Liebherr Crane LR 13000 (Model 42146). This advanced building kit is designed for adults and offers a rewarding construction experience, culminating in a highly functional, remote-controlled crane model. The model is one of the largest in the LEGO Technic range, standing approximately 39 inches tall when fully assembled. It features realistic movements and is controlled via the LEGO CONTROL+ app, offering an immersive and interactive experience.

2. PRODUCT OVERVIEW

The LEGO Technic Liebherr Crane LR 13000 is an intricate model consisting of 2883 pieces. It is equipped with two smart hubs and six large motors that power its articulated functions. Key features include:

- Realistic belt control for movement.
- A rotating platform for precise positioning.
- Functional rocker, winch, and load sensor.
- 24 counterweight parts, totaling 0.9 kg, for stability.
- Remote control via the LEGO CONTROL+ app, providing access to stats and challenges.



Figure 2.1: The fully assembled LEGO Technic Liebherr Crane LR 13000 model.

3. SETUP

3.1. Assembly

The assembly process is detailed across multiple instruction manuals included in the kit. It is recommended to follow the instructions carefully, step-by-step, to ensure correct functionality of all mechanical components.



Figure 3.1: The product box and internal packaging, showing the various sub-boxes and instruction manuals.

3.2. Battery Installation

The model requires 12 AA batteries for its smart hubs and motors. These batteries are not included in the kit and must be purchased separately. Ensure batteries are inserted with correct polarity as indicated in the specific battery compartment instructions.

3.3. CONTROL+ App Connection

To operate the crane, you will need a compatible smart device (smartphone or tablet) with the LEGO CONTROL+ app installed. The smart device is not included. Follow the in-app instructions to connect your device to the model's smart hubs via Bluetooth.

4. OPERATING INSTRUCTIONS

Once assembled and connected to the CONTROL+ app, you can operate the Liebherr Crane LR 13000. The app interface provides intuitive controls for various crane functions:

- **Driving:** Use the app's controls to move the crane forward, backward, and steer its tracks.
- **Platform Rotation:** Rotate the crane's superstructure 360 degrees for optimal positioning.
- **Boom Extension/Retraction:** Control the main boom's length and angle.

- **Winch Operation:** Raise and lower the hook using the winch controls.
- **Rocker Arm:** Adjust the rocker arm for different lifting configurations.
- **Load Sensor:** The app provides feedback from the load sensor, helping to prevent overloading.



Figure 4.1: The LEGO Technic Liebherr Crane LR 13000 demonstrating its lifting capabilities.

5. MAINTENANCE

To ensure the longevity and optimal performance of your LEGO Technic Liebherr Crane LR 13000, follow these maintenance guidelines:

- **Cleaning:** Dust the model regularly with a soft, dry cloth. For deeper cleaning, use a mild soap solution and a soft brush, then rinse thoroughly and air dry. Avoid harsh chemicals.
- **Storage:** Store the model in a cool, dry place away from direct sunlight to prevent discoloration or warping of plastic parts.
- **Battery Care:** Remove batteries from the smart hubs if the model will not be used for an extended period to prevent leakage.
- **Part Integrity:** Periodically check for any loose or damaged parts. Replace as necessary using genuine LEGO components.

6. TROUBLESHOOTING

If you encounter issues with your LEGO Technic Liebherr Crane LR 13000, consider the following:

- **Model Not Responding:** Check if the batteries in the smart hubs are correctly installed and charged. Ensure the smart device's Bluetooth is enabled and the CONTROL+ app is properly connected to the model.
- **Movement Issues:** Verify that all gears and connections are securely in place according to the assembly instructions. Ensure no parts are obstructing the movement of the crane's mechanisms.
- **App Connectivity Problems:** Try restarting both the smart device and the model's smart hubs. Ensure the app is updated to the latest version.
- **Lifting Capacity:** The crane has a specified load capacity. Do not attempt to lift objects heavier than recommended, as this may damage the model or cause instability.

7. SPECIFICATIONS

Attribute	Detail
Product Dimensions	14.88 x 20.59 x 10.12 inches
Item Weight	17.78 pounds
Item Model Number	42146
Number of Pieces	2883
Manufacturer Recommended Age	18 years and up
Batteries Required	12 AA batteries (not included)
Release Date	August 1, 2023
Manufacturer	LEGO

8. SAFETY INFORMATION

Warning! Choking hazard. Small Parts. Not suitable for children under 3 years.

This product contains small parts that may pose a choking hazard. Adult supervision is recommended during assembly and operation, especially around young children.

9. WARRANTY AND SUPPORT

For warranty information, missing parts, or technical support, please refer to the official LEGO website or contact LEGO customer service directly. Keep your proof of purchase for any warranty claims.