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> LEGO Technic Volvo FMX Truck & EC230 Electric Excavator Building Toy, Volvo Truck Toy with 2 Model Vehicles, Great Gift for Boys and Girls Ages 10 and Up Who Love Heavy Duty Construction Models, 42175

LEGO 42175

Instruction Manual

LEGO TECHNIC VOLVO FMX TRUCK & EC230 ELECTRIC EXCAVATOR (MODEL 42175)

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1. INTRODUCTION

Welcome to the world of LEGO Technic! This manual provides detailed instructions for assembling and understanding the features of your new LEGO Technic Volvo FMX Truck & EC230 Electric Excavator (Model 42175) building toy. This set offers an immersive building experience with two highly detailed model vehicles designed for enthusiasts aged 10 and up.

The set allows you to construct a heavy-duty Volvo FMX Truck with a flatbed trailer and an EC230 Electric Excavator, complete with a charging station. Explore the intricate mechanics and functional elements that bring these construction vehicles to life.



Figure 1: The complete LEGO Technic Volvo FMX Truck & EC230 Electric Excavator set, showing both the packaging and the assembled models.

2. PACKAGE CONTENTS

Before beginning assembly, please ensure all components are present. The package for the LEGO Technic Volvo FMX Truck & EC230 Electric Excavator (Model 42175) contains the following:

- LEGO Building Elements (2,274 pieces)
- Instruction Manuals (multiple booklets for different stages of assembly)
- Sticker Sheet (for detailed model aesthetics)

Carefully open all bags and sort pieces to facilitate the building process. Refer to the instruction manuals for a detailed list of parts per bag.

3. KEY FEATURES

The LEGO Technic Volvo FMX Truck & EC230 Electric Excavator set is designed with realistic functions and intricate details, providing an engaging building and play experience. Key features include:

- **Volvo Truck Toy with Buildable Excavator:** A comprehensive set featuring a heavy-duty truck, a flatbed trailer, an electric excavator, and a charging station.
- **Working Truck Features:** The truck includes a detailed 6-cylinder moving piston engine visible by tilting the operator's cabin. It also features functional steering, a detachable trailer, and a fold-down ramp for loading and unloading the excavator.
- **Explore the Excavator:** The excavator can swivel 360 degrees on its tracks. It incorporates a pneumatic pump

system to manually lift and lower the scoop, simulating real-world excavator operations.

- **Toy Electric Charging Station:** A unique accessory that can be lifted and lowered using the excavator's scoop and chains, allowing for imaginative play scenarios involving charging the electric excavator.
- **Introduction to Engineering:** This LEGO Technic model set provides a hands-on introduction to engineering principles through realistic movement and mechanisms.



Figure 2: A child engaging with the fully assembled LEGO Technic Volvo FMX Truck and EC230 Electric Excavator, demonstrating the play potential of the detailed construction vehicle build.

4. SETUP & ASSEMBLY

The assembly of the LEGO Technic Volvo FMX Truck & EC230 Electric Excavator is a multi-stage process designed to be challenging yet rewarding. With 2,274 pieces, careful attention to the instruction manuals is crucial.

1. **Unpack and Sort:** Open all numbered bags in sequence as indicated by the instruction manuals. It is recommended to sort pieces by color and type for easier identification.
2. **Follow Instructions:** Adhere strictly to the step-by-step visual instructions provided in the booklets. Each step builds upon the previous one, ensuring correct assembly.
3. **Truck Chassis Assembly:** Begin with the truck's chassis, which forms the foundation of the vehicle. This includes the engine and cabin mechanisms.
4. **Trailer Construction:** Proceed to build the flatbed trailer, ensuring the ramp mechanism is correctly installed for future use.
5. **Excavator Assembly:** Construct the EC230 Electric Excavator, paying close attention to the pneumatic pump system and track assembly for proper functionality.
6. **Charging Station:** Assemble the compact charging station, which interacts with the excavator.
7. **Final Connections:** Connect the truck, trailer, and excavator as per the final steps in the manual.



Figure 3: A close-up view of the LEGO Technic Volvo FMX Truck and EC230 Electric Excavator during the assembly process, highlighting the intricate details and components.

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Video 1: An official overview of the LEGO Technic Volvo FMX Truck & EC230 Electric Excavator, showcasing its features and assembly process.

5. OPERATING INSTRUCTIONS

Once assembled, the LEGO Technic Volvo FMX Truck & EC230 Electric Excavator offers various interactive functions:

5.1. Truck Operation

- **Engine Access:** To view the detailed 6-cylinder moving piston engine, gently tilt the operator's cabin forward.
- **Steering:** Use the steering mechanism on the truck to maneuver it into desired positions.
- **Trailer Detachment:** The flatbed trailer can be detached from the truck for independent movement or to facilitate loading/unloading.
- **Ramp Function:** Fold down the rear ramp of the trailer to allow the excavator to roll on or off.

TILT THE CABIN TO SEE THE 6-CYLINDER PISTON ENGINE

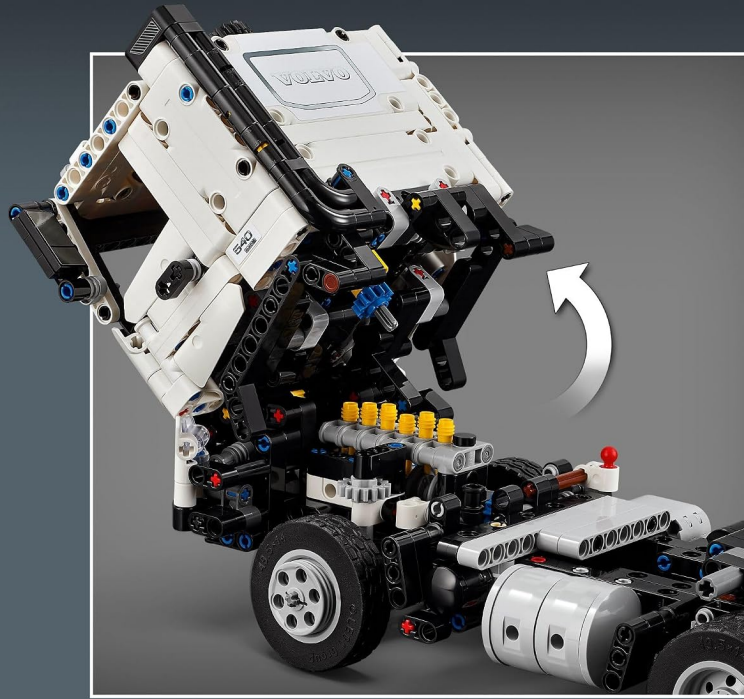


Figure 4: The truck's cabin is shown tilted forward, providing a clear view of the intricate 6-cylinder moving piston engine, a key functional detail of the model.

5.2. Excavator Operation

- **360-Degree Swivel:** The excavator's main body can rotate a full 360 degrees on its tracks, allowing for versatile positioning.
- **Pneumatic Scoop Control:** Utilize the integrated pneumatic pump to manually control the lifting and lowering of the excavator's scoop. This simulates the hydraulic action of a real excavator.



Figure 5: The EC230 Electric Excavator's arm is shown in two positions, illustrating the functionality of the pneumatic pump to raise and lower the scoop.

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Video 2: A short demonstration of the LEGO Technic Volvo FMX Truck & EC230 Electric Excavator's rotational capabilities and pneumatic functions.

5.3. Charging Station Interaction

- **Lifting and Lowering:** The charging station can be lifted and lowered using the excavator's scoop and chains, simulating real-world construction site activities.
- **Attachment:** Attach the charging station to the excavator toy for transport or simulated charging.



Figure 6: The EC230 Electric Excavator is positioned next to the charging station, demonstrating how the two models interact for play scenarios.

6. MAINTENANCE

Proper care will ensure the longevity and functionality of your LEGO Technic set:

- **Cleaning:** To clean LEGO elements, use a mild soap solution and lukewarm water (not exceeding 40°C or 104°F). Rinse thoroughly and air dry. Avoid using hot water, harsh chemicals, or abrasive materials, as these can damage the plastic.
- **Storage:** Store the assembled model and any spare parts in a cool, dry place away from direct sunlight to prevent discoloration and warping.
- **Dusting:** Regularly dust the model with a soft brush or compressed air to prevent dust buildup in moving parts.
- **Handling:** Handle the model with care, especially when operating the functional mechanisms, to avoid unnecessary stress on the components.

7. TROUBLESHOOTING

If you encounter any issues with your LEGO Technic Volvo FMX Truck & EC230 Electric Excavator, consider the following common solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Moving parts are stiff or not functioning smoothly.	Incorrect assembly of gears, axles, or pneumatic hoses; dust buildup.	Review the relevant section of the instruction manual to ensure all parts are correctly aligned and connected. Clean any visible dust. Ensure pneumatic hoses are not kinked or disconnected.
Missing pieces during assembly.	Pieces may be overlooked or accidentally discarded with packaging.	Double-check all packaging materials and the building area. If a piece is genuinely missing, contact LEGO Customer Service for replacement parts.
Model appears unstable or parts fall off easily.	Loose connections or incorrect placement of structural elements.	Carefully re-examine the connections, especially those involving Technic pins and axles. Ensure all connections are firm and secure as per the instructions.

For further assistance, please refer to the official LEGO support resources.

8. SPECIFICATIONS

Attribute	Detail
Product Name	LEGO Technic Volvo FMX Truck & EC230 Electric Excavator
Model Number	42175 (Item model number: 6470653)
Brand	LEGO
Number of Pieces	2,274
Recommended Age	10 years and up
Product Dimensions (Assembled Model)	Over 3 in. (8 cm) high, 26.5 in. (68 cm) long and 5 in. (13 cm) wide
Item Weight	7.52 pounds
Release Date	July 31, 2024

9. WARRANTY & SUPPORT

LEGO products are manufactured to high-quality standards. For information regarding warranty, missing parts, or further product support, please visit the official LEGO Customer Service website or contact their support line. Keep your purchase receipt as proof of purchase.
Official LEGO Support: www.lego.com/service