

## KATO 12702-2

# KATO N Gauge BR86 Steam Locomotive Model 12702-2 Instruction Manual

Comprehensive Guide for Setup, Operation, and Maintenance

## 1. INTRODUCTION

Thank you for purchasing the KATO N Gauge BR86 Steam Locomotive Model 12702-2. This model is a detailed replica of the German National Railway BR86 tank locomotive, known for its versatility and historical significance. This manual provides essential information to ensure safe and enjoyable operation, including setup, operating procedures, maintenance, and troubleshooting.

Please read this manual thoroughly before using your model to ensure proper handling and to maximize its lifespan.



Figure 1: KATO N Gauge BR86 Steam Locomotive Model 12702-2, side view.

This image displays the KATO N Gauge BR86 Steam Locomotive from a side perspective, highlighting its intricate details and robust design.

## 2. SETUP

Before operating your KATO BR86 locomotive, ensure proper setup of your railway layout and the model itself.

### 2.1 Initial Inspection

Carefully remove the locomotive from its packaging. Inspect the model for any visible damage or loose parts. Ensure all wheels are properly seated and move freely.



Figure 2: KATO N Gauge BR86 Locomotive in its clear plastic case.

This image shows the KATO BR86 locomotive securely packaged in its transparent plastic case, indicating how it appears upon unboxing.

## 2.2 Track Preparation

Ensure your N Gauge tracks are clean and properly assembled. Dust and dirt on the tracks can interfere with electrical contact and smooth operation.

- Always clean dust from the tracks using a vacuum cleaner or a soft brush before and during operation.
- Wipe off any dirt or grime from the tracks with a clean, dry cloth.

## 2.3 Power Connection

Connect your power pack to the tracks according to its instructions. The KATO BR86 locomotive operates on DC (direct current) power.

- Operate the vehicle with **DC (direct current) 12 volts or less**. Exceeding this voltage may damage the motor.
- In case of a short circuit on the tracks, immediately turn off the power pack to prevent damage to the locomotive or power supply.



Figure 3: Original KATO N Gauge BR86 Instruction Sheet (Japanese).

This image displays the original instruction sheet provided with the KATO BR86 model, detailing important precautions and specifications in Japanese.

### 3. OPERATING INSTRUCTIONS

Once the tracks are clean and power is connected, you can begin operating your locomotive.

#### 3.1 Placing the Locomotive on Tracks

Carefully place the locomotive on the tracks, ensuring all wheels are correctly seated on the rails. Avoid forcing the locomotive onto the tracks.

#### 3.2 Starting and Stopping

Gradually increase the voltage from your power pack to start the locomotive. Avoid sudden acceleration or deceleration, as this can cause derailments or stress on the motor. To stop, slowly decrease the voltage until the locomotive comes to a complete halt.

#### 3.3 Direction Control

Use the direction switch on your power pack to change the locomotive's direction of travel. It is recommended to bring the locomotive to a complete stop before reversing direction.



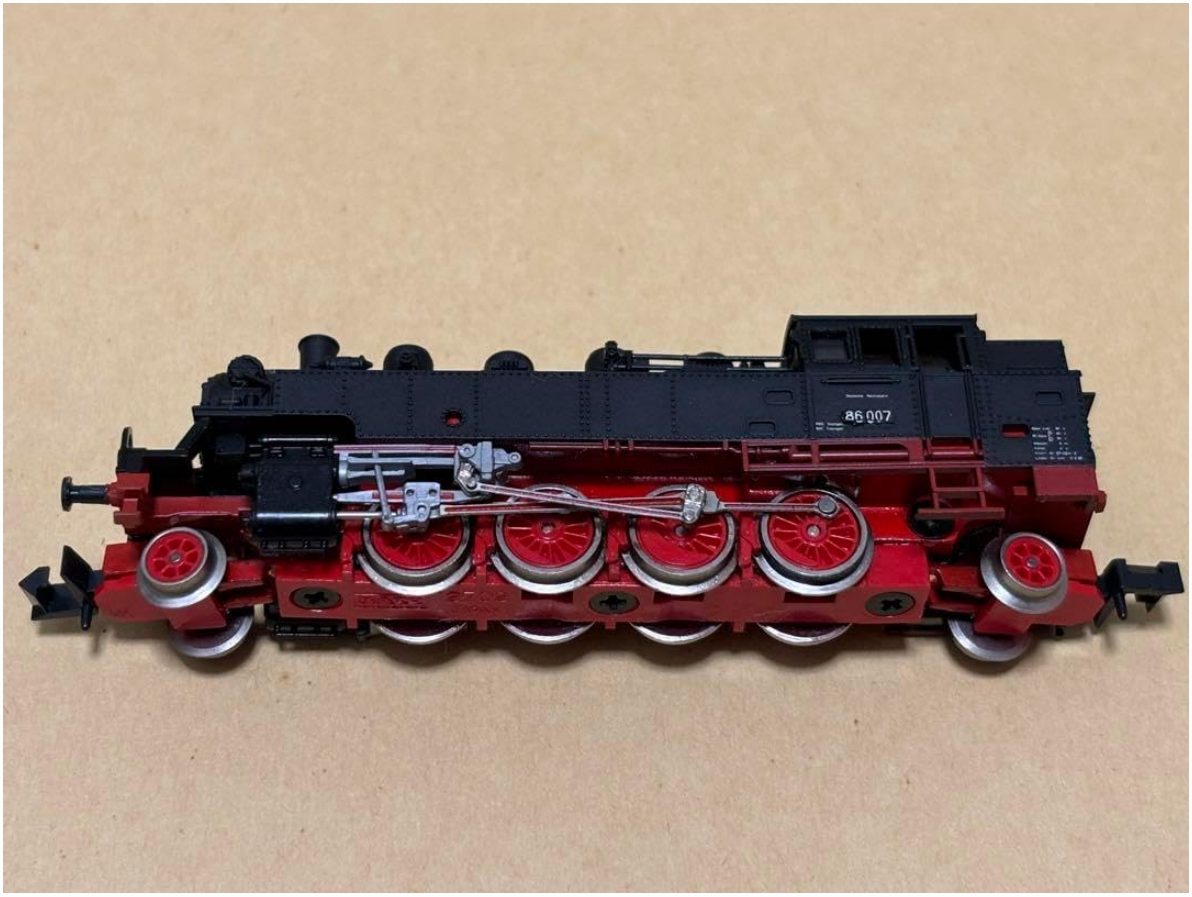


Figure 4: KATO N Gauge BR86 Steam Locomotive, side view on a surface.

This image provides another side view of the KATO BR86 locomotive, showcasing its detailed construction and readiness for operation.

## 4. MAINTENANCE

Regular maintenance will ensure the longevity and optimal performance of your KATO BR86 locomotive.

### 4.1 Cleaning the Locomotive

- Use a soft, dry cloth to gently wipe the exterior of the locomotive to remove dust and fingerprints.
- For wheels, use a specialized track cleaning tool or a cotton swab lightly dampened with isopropyl alcohol to clean the wheel treads. Ensure no liquid enters the motor or gears.
- **Do not oil the vehicle.** KATO models are designed for smooth operation without additional lubrication by the user. Improper oiling can attract dust and hinder performance.

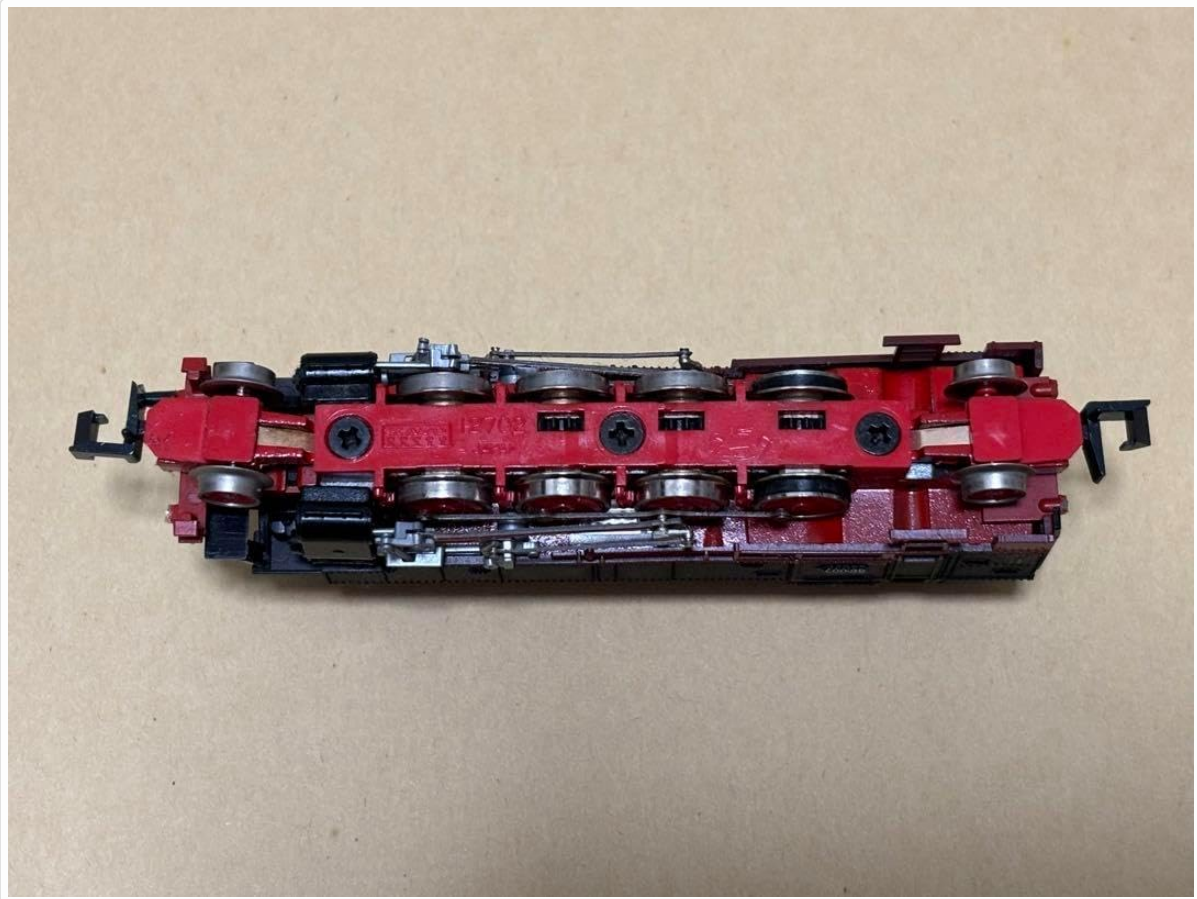


Figure 5: Underside view of KATO N Gauge BR86 locomotive.

This image shows the underside of the locomotive, revealing the wheel mechanisms and electrical contacts, which are crucial areas for cleaning and inspection.

## 4.2 Storage

When not in use, store the locomotive in its original packaging or a dedicated model train case to protect it from dust and physical damage. Avoid storing in extreme temperatures or high humidity.

# 5. TROUBLESHOOTING

If you encounter issues with your locomotive, refer to the following common troubleshooting steps:

## 5.1 Locomotive Not Moving

- **Check Power Supply:** Ensure your power pack is turned on and functioning correctly.
- **Check Track Connection:** Verify that the power pack is securely connected to the tracks.
- **Clean Tracks:** Dust or dirt on the tracks can prevent electrical contact. Clean the tracks as described in Section 2.2.
- **Clean Wheels:** Dirt on the locomotive's wheels can also impede electrical pickup. Clean the wheels as described in Section 4.1.
- **Inspect for Obstructions:** Look for any foreign objects or debris that might be preventing the wheels from turning freely.

## 5.2 Erratic Movement or Stalling

- **Track Cleanliness:** This is the most common cause. Thoroughly clean your tracks.
- **Wheel Cleanliness:** Ensure locomotive wheels are clean.
- **Track Gaps:** Check for any loose track connections or gaps that might interrupt power flow.
- **Derailment:** Ensure the locomotive is properly seated on the tracks.

### 5.3 Contacting Support

For vehicle malfunctions, inspections, or maintenance beyond basic troubleshooting, please contact the department store or retailer where you purchased the model, or the KATO service department.

## 6. SPECIFICATIONS

Detailed specifications for the KATO N Gauge BR86 Steam Locomotive Model 12702-2:

Feature	Detail
Model Number	12702-2
Brand	KATO
Type	German National Railway BR86 Steam Locomotive
Arrangement	1-D-1 (Tank locomotive)
Manufacturing Period	First manufactured in 1928
Total Units Produced	774 units
Driving Wheel Diameter	1400mm (prototype)
Weight	87.5t (prototype)
Scale	N Gauge
Special Features	Equipped with counter-pressure brake (prototype). Optional Kadee coupler (MT-10) can be attached to the model.



Figure 6: Close-up of KATO N Gauge BR86 locomotive with detail parts.

This image provides a detailed view of the locomotive's side, including the number '86 007' and a sprue of additional detail parts that may be included for customization.

## 7. WARRANTY AND SUPPORT

KATO products are manufactured to high standards. While specific warranty details are typically provided with the product packaging or by the retailer at the time of purchase, general support information is as follows:

### 7.1 Product Support


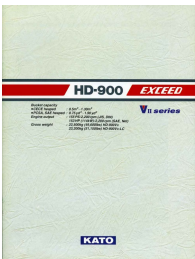

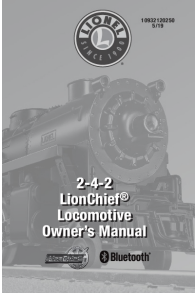

For any questions regarding the operation, maintenance, or troubleshooting of your KATO BR86 locomotive that are not covered in this manual, please refer to the contact information provided by your retailer or on the official KATO website.

### 7.2 Service and Repairs

If your locomotive requires inspection, repair, or service, please contact the department store or retailer where you purchased the item. They will be able to guide you on the appropriate steps for service or direct you to the KATO service department.



## Related Documents - 12702-2

	<p><a href="#">KATO HD1430III Fully Hydraulic Excavator Service Manual</a></p> <p>Comprehensive service manual for the KATO HD1430III Fully Hydraulic Excavator, covering introduction, specifications, engine unit, hydraulic pump equipment, control equipment, front attachment, superstructure, lower structure, and electrical equipment, along with usage instructions and troubleshooting guidance.</p>
	<p><a href="#">KATO HD-900 EXCEED Excavator: Advanced Features &amp; Specifications</a></p> <p>Discover the KATO HD-900 EXCEED series hydraulic excavators, featuring advanced APC technology for optimal performance and fuel efficiency. This brochure details models like the HD-900VII and HD-900V-LC, highlighting their powerful engines, comfortable cabs, and robust construction for demanding job sites.</p>
	<p><a href="#">KATO Thread Kits: Comprehensive Guide to Thread Repair Solutions</a></p> <p>Discover KATO Thread Kits, a leading provider of advanced thread repair solutions including Perma-Coil, Perma-Plug, and Perma-Kee. This catalog details high-quality thread repair kits for automotive, industrial, and production applications, emphasizing durability and performance.</p>
	<p><a href="#">Lionel 2-4-2 LionChief Locomotive Owner's Manual</a></p> <p>Comprehensive owner's manual for the Lionel 2-4-2 LionChief steam locomotive, detailing operation via remote control and the LionChief app, maintenance procedures, troubleshooting tips, and warranty information.</p>
	<p><a href="#">Märklin START UP ICE 2 Model Train Set 36712 User Manual</a></p> <p>Comprehensive user manual for the Märklin START UP ICE 2 model train set (model 36712), detailing operation, safety, functions, troubleshooting, maintenance, and spare parts for this mfx-enabled locomotive.</p>



[Lionel SD40-2 Diesel Locomotive Owner's Manual](#)

Comprehensive owner's manual for the Lionel SD40-2 Diesel Locomotive, detailing operation with LEGACY, TMCC, Conventional, and LionChief Bluetooth systems, maintenance, and troubleshooting.

Documents - KATO – 12702-2

no relevant documents