

LGB Toy Train, or Porter, using a variety of names such as Emma or Otto

Motors

There's often confusion about these little locomotives, with some being made in China while others in Korea – they typically use numbers such as 92079 or 22771. One of the confusing factors is what gears or wheels the locomotive uses.

There are basically two different versions, they can be identified based on the gears and motors.

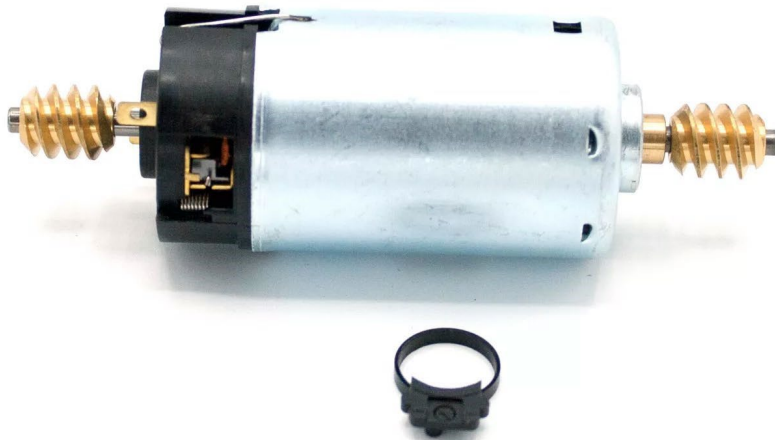
The Korean version uses a Chinese motor that we reference as the square motor.



If your porter locomotive uses this motor, **This motor is not available**, however replacement gears are, and with some creativity, wheel sets can be replaced. However, the wheel sets do require some adaptation.

The gears that work with this motor, are the 28 tooth gear, which we identify as [LGB-22771-039 \(trainli.com\)](https://www.trainli.com/LGB-22771-039)

If your porter uses This Buhler motor, your locomotive will use a 20-tooth gear, this is sold separate or on the wheel's axle set.



Wheel Sets for the Toy Train, Porter locomotive.

There are two different designs, The style which matches the square Chinese motor **are not available** -

These wheel sets use a 28-tooth gear, and are identical between the front and rear axles in that they have the same length for side rod mounting stem. These also use special machine screws to attach the side rods, the rear screw is longer.

The older style wheels and machine screws are pictured below.

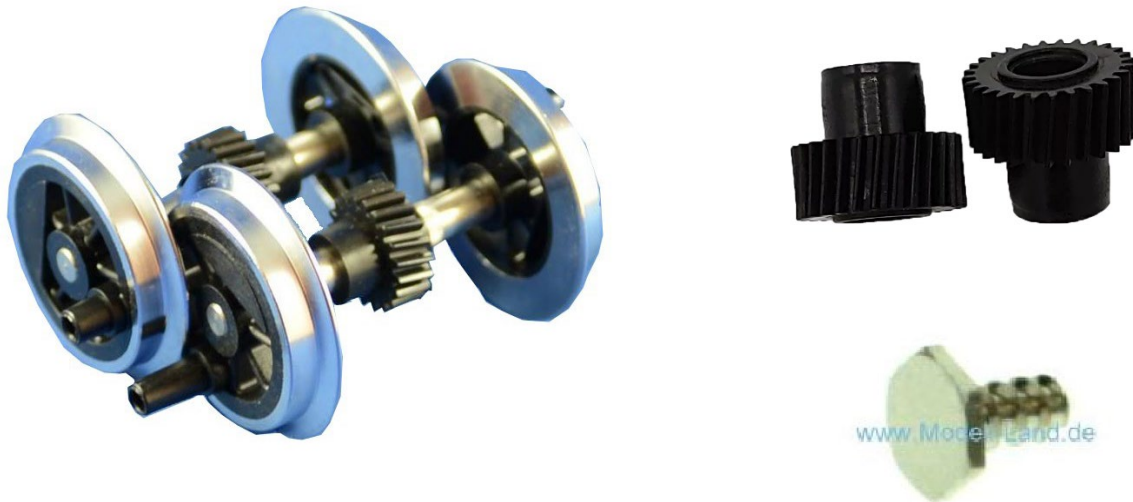


The 28-tooth gear is available on our website. [LGB-22771-039 \(trainli.com\)](http://LGB-22771-039.trainli.com)

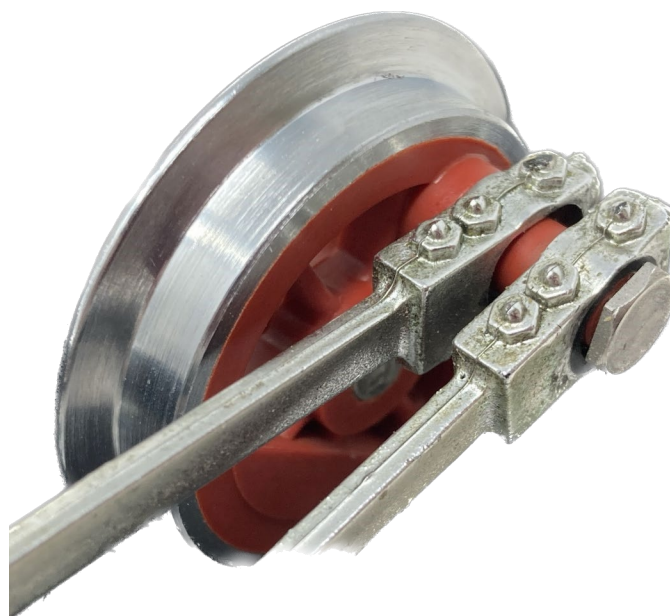
Replacing the wheels & gears locomotives that use the square motor.

WARNING – this is not a simple parts swap, you'll need to have the ability to press wheels and gears on and off.

To replace the wheels & axels for the style that uses the square motor you'll need to adapt the newer style replacement set. This set comes with a 20-tooth b-style gear. You will need to press the wheels and gears off the axle they are shipped with, then press gear [the 28-tooth gear](#), on to the new axel, and press and re-quarter the wheels. in addition, you'll need to replace all 4 [hex-head screws](#) used for mounting the side rods.



As part of the update, shown in the photo below, you need to ensure the wheels with the longer side rod mounting stem are in the rear of the locomotive and have the push rod placed over top of the main rod as show in the photo.



Shopping list for wheels & gears

All other parts are interchangeable.

Gearbox that uses square style Chinese motor

- **Motor not available**
- 28-tooth gear [LGB-22771-039 \(trainli.com\)](https://trainli.com/LGB-22771-039)
- LGB replacement wheel set red [Axle set \(trainli.com\)](https://trainli.com/Axle%20set) needs to be adapted
- LGB replacement wheel set back [Axle set \(trainli.com\)](https://trainli.com/Axle%20set) needs to be adapted
- Hex head screws [Hexagon Head Screw, 8mm, LGB 25841-M009 \(trainli.com\)](https://trainli.com/Hexagon%20Head%20Screw,%208mm,%20LGB%2025841-M009)

Gearbox that uses the round style Buhler motor

- Motor – part number 96208
- 20-tooth gear – part number LGB-22771-040
- LGB replacement wheel set red [Axle set \(trainli.com\)](https://trainli.com/Axle%20set)
- LGB replacement wheel set back [Axle set \(trainli.com\)](https://trainli.com/Axle%20set)