



# How to Free Wheelchair Mission GEN 1

Use this guide to instal a new tube to repair a flat tire.

Written By: Andrew Blocher



# INTRODUCTION

This guide will show you how to remove a punctured tube and replace it.

Read through the [Free Wheelchair Mission GEN 1 Tools guide](#) to familiarize yourself with all the tools necessary.



## TOOLS:

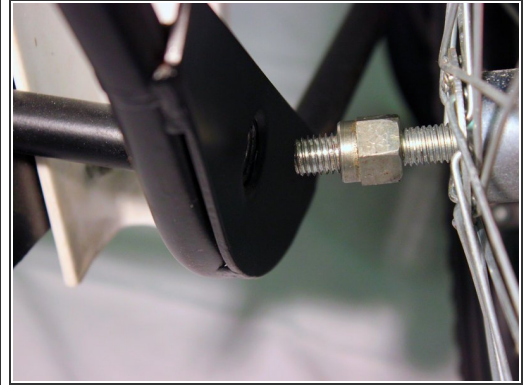
- [Tire Levers](#) (2)



## PARTS:

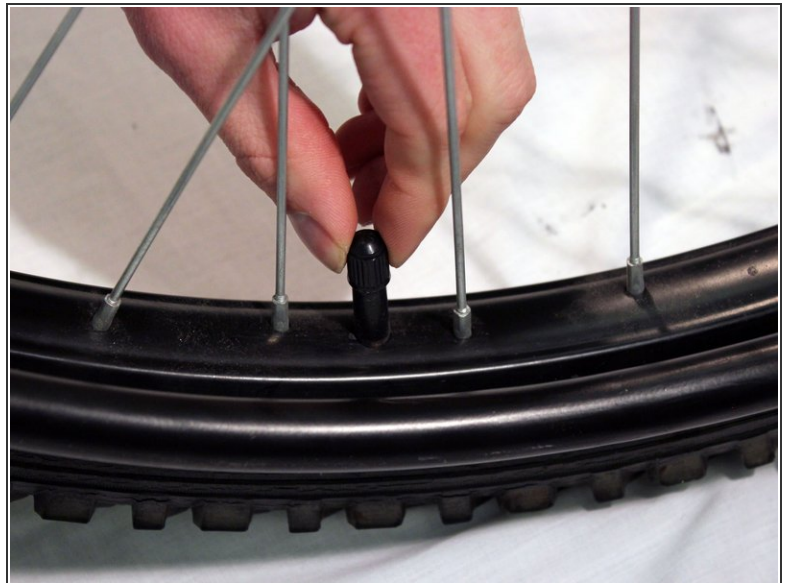
- [Large Wheelchair Frame](#) (1)
- [White Plastic Chair](#) (1)
- [Large Back Wheel](#) (1)
- [Small Front Frame](#) (1)
- [Air Pump](#) (1)
- [Brakes](#) (1)
- [Axel Plates](#) (1)
- [Footrest](#) (1)
- [Small Front Wheels](#) (1)
- [Large Bolts](#) (1)
- [Large Nuts](#) (1)
- [Small Bolts](#) (1)
- [Small Nuts](#) (1)
- [Black Bolt Bracket](#) (1)
- [Nut](#) (1)
- [Free Wheelchair Mission Custom Multi-Purpose Tool](#) (1)

## Step 1 — Remove Rear Wheel



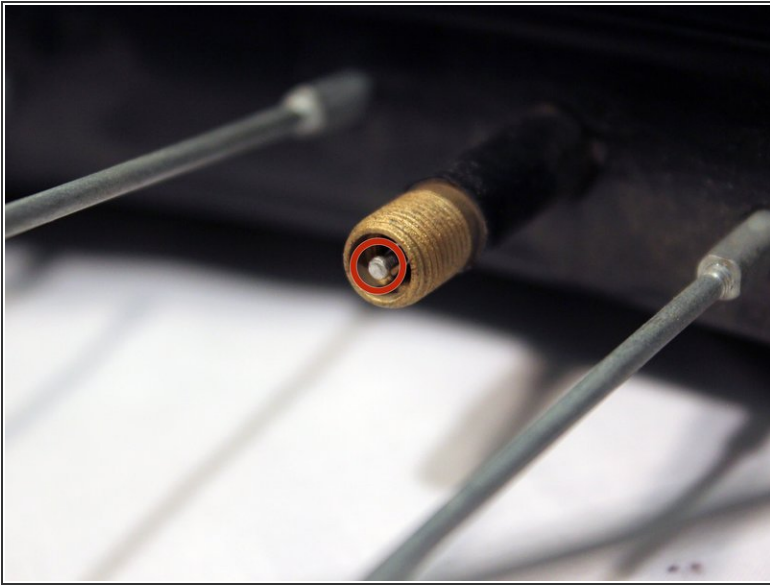
- Unscrew the axle bolt Using the Free Wheelchair Mission Custom Multi-Purpose Tool on the bolt head and a 19mm crescent wrench on the nut.
- Remove the wheel and set it aside.
- ① You can also use a 19mm socket instead of the multitool.

## Step 2 — Remove Cap of Tube Stem



- Unscrew the cap of the tube stem and set it aside.

### Step 3 — Release Air From The Tire



- Release any air that remains by pressing down on the piston in the head of the stem.

### Step 4



- Take a tire lever and fit it under the edge of the tire.
- Pop the edge of the tire out of the rim of the wheel by pushing down on the lever.
- Clip the opposite end of the lever onto the closest spoke.

## Step 5



- Take another tire lever and repeat step 4 roughly 2.5 inches away from where you are holding the other tire lever.

## Step 6



- Holding one tire lever in place, slide the other lever around the rest of the wheel until the side of the tire is completely free of the rim.

## Step 7



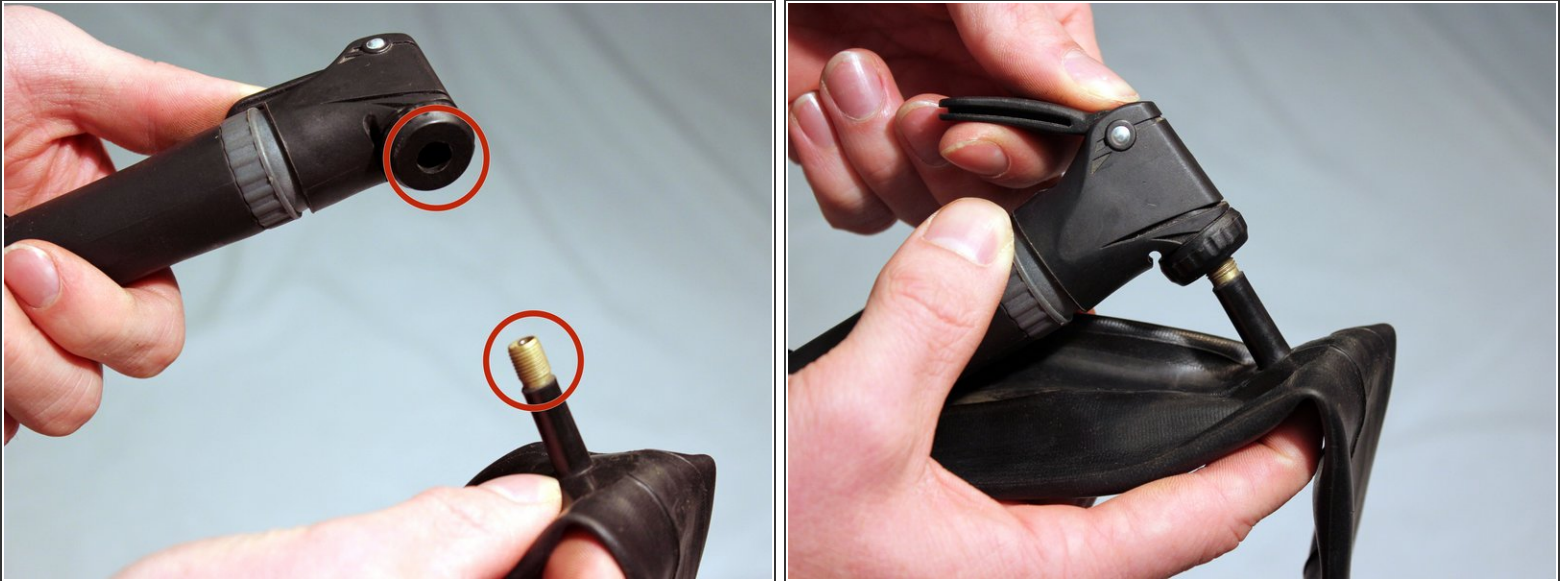
- Push the stem of the tube back through the hole in the rim it comes out of.
- Reach under the tire and pull the tube out.

## Step 8



- Unfold the new tube and unscrew the cap of the stem.
- ⓘ Set the cap aside someplace safe. You will need to put it back on later.

## Step 9



- Fit the stem of the tube firmly into the hole in the pump that comes on the frame.
- Lift the lever on the head of the pump up.

## Step 10



- Pull the handle of the piston at the bottom of the pump out.
- Pump a small amount of air into the tube so that it holds its basic shape.
- ❗ To pump air into the tube pull the piston out then push it back in.

## Step 11



- Push the stem of the tube through the hole in the rim so that the head is on the outside.
- Push the rest of the tube under the tire so it sits evenly on the rim.

## Step 12



- Push the tire back onto the rim working your hands around the wheel.
  - Pump air into the tube until the tire is firm and can support your weight.
  - Screw the cap back onto the head of the tube stem.
- i** If you have a pressure gauge it should read around 40 psi.

## Step 13



- Put the wheel back on the axle and screw in the bolt using the multitool or 19mm socket and 19mm crescent wrench.
- ⓘ Make sure the handle faces out.