

Guide to Replacing a Punctured Tyre

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Introduction

Most of us have been or will be in a situation where we have to replace a punctured tyre of a car. This guide will take you through the steps to replace a punctured tyre single-handedly.

Before you begin

Minimum Requirements

- Spare inflated tyre
- Jack
- Wheel spanner

Essentials

- Water
- First-aid kit
- Cloth/Mat
- Gloves
- Mobile phone
- Torch/emergency lamp
- Tool kit

Procedure

Preparations

It is very essential to find the right spot for changing the tyre. Ensure that the place you decide to change your tyre is not:

- inclined
- around a corner
- too dark
- traffic-heavy.

Once you find an appropriate place that meets most of the requirements, stop the car.

Before getting out of the car, remember to:

- switch off the engine
- enable the hand brake
- switch on the hazard indicator
- shift the car to either the first or reverse gear.

Tip: Ensure that you are alongside the kerb of a long road while replacing the tyre. This would avoid any potential accidents.

1. If you have a cloth or mat with you, spread it on the ground next to the tyre, which is to be replaced. If you have gloves, wear them and switch on your torch or emergency lamp if required.
2. Remove the spare tyre, jack and wheel spanner from the car. These are usually found in the boot of the car. Place them near the tyre, which is to be replaced.
3. If you have a first-aid kit, mobile phone and/or water, keep them in an easily accessible location.
4. Roll up your sleeves.

In the next stage, you will learn to unscrew the nuts and prepare to replace the punctured tyre.

Stage 1: Unscrewing the nuts

This stage will guide you through the process of unscrewing the nuts of the punctured tyre.

1. If there is a hubcap on the wheel, remove it. You might need to use a screwdriver. This will reveal four or five nuts securing the wheel.
2. Use the wheel spanner to loosen (anti-clockwise) the nuts. If the nuts are very tightly secured,
 - place the wheel spanner securely over the nut
 - place one foot over the end of the spanner and support yourself on the car with your hands
 - now put your full weight on the wheel spanner. You might have to bounce on the wheel spanner to loosen the nut.



Image 1: An image of a wheel spanner.

3. Leave a few turns remaining, which can be loosened with your hand. *Do not remove the nut completely.*
4. Repeat the same for the other nuts the order shown in the image.

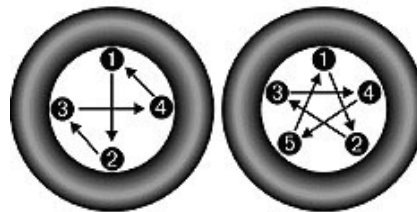


Image 2: The right order to remove the nuts of a tyre.

In the next stage, you will learn how to raise the car with the jack.

Stage 2: Raising the car

This stage will guide you through the process of raising the car to assist you in replacing the punctured tyre. To remove the tyre, you will have to raise that end of the car.

Each car has a special plate designed to support the jack contact, the spot where the jack lifts the car. Your manual must give you more details about it. The positions for the jack contact are usually about 6" to 12" behind the front tyre, or 6" to 12" in front of the rear tyre. Search a few inches in from the car's body for the car's sturdy frame, and avoid using the suspension or it will be damaged.

There are two commonly used varieties of jacks.

- Motorised
- Mechanical

Using Motorised Jacks

1. Place the jack in the appropriate position.
2. Use the raise option on the remote control to raise the cylinder slightly.
3. You might have to re-adjust the position of the jack.

4. Use the raise option on the remote control to raise the car.
5. Once the wheel is above the ground, use the stop option on the remote control to stop raising the car.



Image 3: An image of a motorised jack.

Using Mechanical Jacks

1. Place the jack in the appropriate position.
2. Insert the jack handle into the socket of the jack body.
3. Turn the jack handle in the appropriate direction to raise it slightly.

6. You might have to re-adjust the position of the jack.
7. Turn the jack handle in the appropriate direction to raise the car.
8. Once the wheel is above the ground, stop turning the jack handle.



Image 4: An image of a mechanical jack and jack handle.

In the next stage, you will learn how to remove the punctured tyre.

Stage 3: Removing the punctured tyre

This stage will guide you through the process of removing the punctured tyre from the car. Now is the time to remove the nuts completely from the car, since the tyre is above the ground.

1. Unscrew the nuts completely using your hands. Place them in a safe position. For example, in the hubcap or on the mat or cloth. The nuts must not roll away.
2. Hold the tyre with both hands (at the three o'clock and nine o'clock positions).
3. Pull the punctured tyre out.
4. Rest the tyre on the car, or place it on the floor. It must not roll.

In the next stage, you will learn how to put the new tyre on the car.

Stage 4: Putting on the new tyre

This stage will guide you through the process of putting the new tyre on the car. If you have not already placed the spare tyre near you, now is the time.

1. Hold the new tyre with both hands.
2. Line up the holes in the rim to the screws.
3. If there is not enough clearance to mount the inflated tyre:
 - a. Place the tyre aside.
 - b. Raise the car a little more.
4. Slide the new tyre over the screws until it cannot be pushed any further.
5. Tighten (clockwise) the nuts in the right order (refer Image 2) using your hands.
6. Use the wheel spanner to turn them a little more, but not completely in the same order.
7. Lower the jack so that the tyre touches the ground but does not rotate.
8. Now tighten all the nuts completely. You might have to use your body weight again.

In the next stage, you will learn how to lower the car.

Stage 5: Lowering the car and packing up

This stage will guide you through the process of lowering your car.

1. Lower the jack, using the appropriate method.
2. Replace the hubcap if the car has one. You might have to bang it to secure its position.
3. Place the punctured tyre in the spare tyre's position.
4. Place the jack, tool kit and all other things in their respective positions.
5. Wash your hands if required.
6. Watch for passing cars while going back to the driver's position.
7. Drive away!

Tip: Remember to stop at the next service station to repair your punctured tyre.

Glossary

Bolt

Screws into a nut to form a fastener.

Hubcap

A decorative accessory, which fits over the hub of a wheel.

Inflated Tyre

The covering for a wheel, which is filled with air.

Jack

A mechanical or electrical device used for lifting.

Nut

A small square or hexagonal metal block with internal screw thread to be fitted onto a bolt.

Screw

A fastener with a tapered threaded shank and a slotted head.

Wheel Spanner

A hand tool that is used to hold or twist a nut or bolt.

Notes