

# JOB ROLE – AUTOMOTIVE SERVICE TECHNICIAN

Sector: Automotive  
(Qualification Pack Code : ASC/Q1401)



PSS Central Institute of Vocational Education  
Shyamla Hills, Bhopal – 462013, Madhya Pradesh, India

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**Unit – 1 : Automobile and their Components**  
**Session 12 : Wheel and Tyres**

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# Session Objectives

1. The student will be Able to explain importance of tyres and wheel
2. Able to identify different type of tyres.

# Wheels

The wheel is an important component of a vehicle. Wheel is assembly of hub, disc or spokes, rim, tyre and tube. The wheels not only support the weight of the vehicle, but also protect it from the road shocks.

# Tyre

The tyre is mounted on the wheel rim. It has to carry the vehicle load and provide a cushioning effect



**Fig : Tyre**

# Types of Tyres

**1. Tube tyre:** Tube tyre is the traditional tyre. It encloses a tube in which air is forced to a high pressure as a cushioning medium. The outer position of the tyre which rolls on the road is made of synthetic rubber and is called tread. On the inner edges, beads are formed by reinforcing with steel wires. The beads act as strong shoulders, for bearing against the wheel rim. Rayon cords are formed into a number of piles.

# Types of Tyres

**2. Tubeless Tyre:** Tubeless tyre does not enclose the tube. The air under pressure is filled in the tyre itself. The inner construction of this tyre is almost the same as that of the tube tyre. A non-return valve is fitted to the rim through which the air is forced inside the tyre.

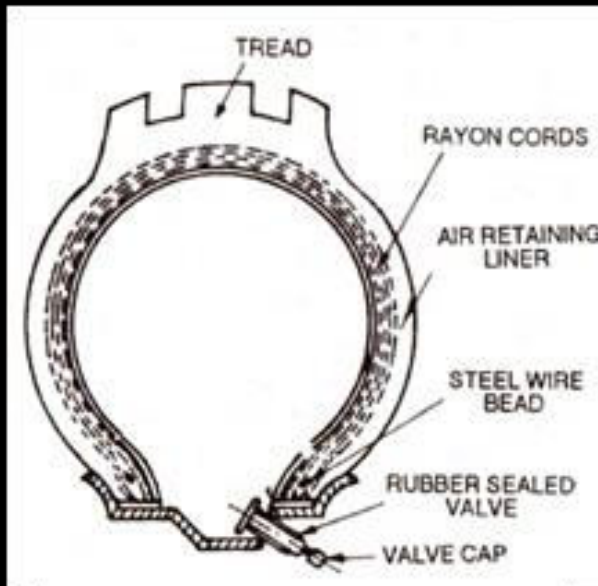


Fig : Tubeless Tyre

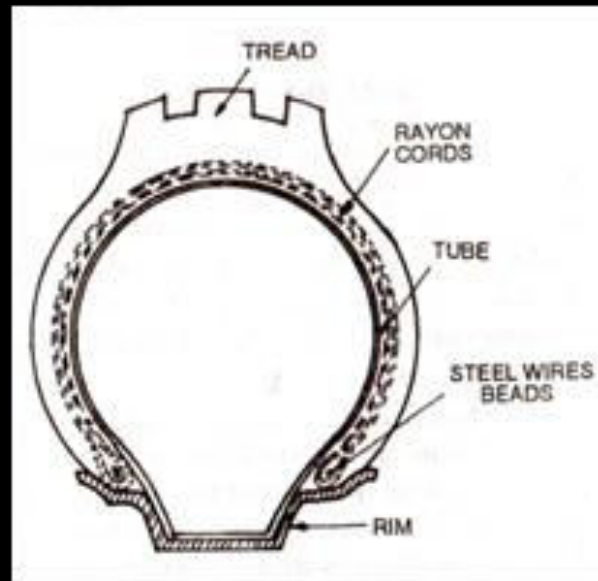


Fig : Traditional Tube Tyre



# Advantages of Tubeless Tyre

- The tubeless tyres are lighter and run cooler than tube tyre.
- The main advantage of a tubeless tyre is that it retains air for a long period even after being punctured by nail, provided the nail remains in the tyre. But, the tube tyre releases the air almost immediately after being punctured.
- Any hole in the tubeless tyre can be repaired simply by rubber plugging.
- Ordinary punctures can be repaired with removing the tyre from the wheel.
- It can be retreated in the same manner as the tube tyre.

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# Advantages of Tubeless Tyre

- The tubeless and tube tyres are called pneumatic tyres, in which the air is forced inside the tube itself or in a tube which is fitted in the tyre. In both the cases, air is the cushioning medium. But in solid tube, it is not so. Neither the air is forced inside the tyre nor the tube is enclosed inside it. The tyre is completely solid and is mounted on the wheel rim. It runs for a life long time. Because, it is a heavy tyre and there is no chance of being punctured. Once it is heavy and does not provide cushioning effect, it is not used on automobiles. Its use is limited to children's tricycles.

# Summary

In this session you have learnt a following , The wheel is an important component of a vehicle. Wheel is assembly of hub, disc or spokes, rim, tyre and tube.

- The tyre is mounted on the wheel rim. It has to carry the vehicle load and provide a cushioning effect.

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