# LEAF SPRING SUSPENSION

**A leaf spring suspension** is a type of suspension system commonly used in heavy-duty vehicles, trucks, and older cars. It consists of multiple layers of flexible metal strips, called leaves, stacked on top of each other to absorb shocks and distribute weight.
It is the most primitive type of suspension.

**<u>Different components of this type of suspension involves</u> :**
**1.leaf springs** which is a stack of metal strips which flex to absorb the shocks.
**2.Axle** which is the central shaft that connects the opposite tyres.
**3.Shackles** connections allowing the movement of springs.
**4.U bolts** that keep the spring to the axle.
**5.Brushings** that reduce the friction.

It works in a way that when the vehicle encounters a bump the wheel moves up and applies force on the axle which in turn flexes the leaf spring and it absorbs the shock. The energy is distributed along the lengths which avoids stress on a single point. Once the force isn't there the spring returns to its original shape and provides the stability to the vehicle.
**Its advantages** are that they are easy to maintain and fewer parts make it cheaper to fix .
**Its disadvantages** are that they offer bad comfort and the leaves can weaken with time and it's out of date for modern cars.

**DEEVASH**