

Forklift Steer Axles

Axles are defined by a central shaft which revolves a wheel or a gear. The axle on wheeled motor vehicles can be attached to the wheels and revolved with them. In this situation, bearings or bushings are provided at the mounting points where the axle is supported. On the other hand, the axle can be connected to its surroundings and the wheels could in turn revolve all-around the axle. In this case, a bushing or bearing is positioned inside the hole in the wheel in order to allow the wheel or gear to turn around the axle.

If referring to trucks and cars, several references to the word axle co-occur in casual usage. Generally, the term means the shaft itself, a transverse pair of wheels or its housing. The shaft itself revolves with the wheel. It is usually bolted in fixed relation to it and known as an 'axle' or an 'axle shaft'. It is equally true that the housing around it that is normally called a casting is otherwise referred to as an 'axle' or sometimes an 'axle housing.' An even broader definition of the term means every transverse pair of wheels, whether they are connected to one another or they are not. Thus, even transverse pairs of wheels inside an independent suspension are frequently called 'an axle.'

In a wheeled vehicle, axles are an essential component. With a live-axle suspension system, the axles work so as to transmit driving torque to the wheel. The axles even maintain the position of the wheels relative to one another and to the vehicle body. In this system the axles must likewise be able to bear the weight of the vehicle together with whichever load. In a non-driving axle, like the front beam axle in several two-wheel drive light trucks and vans and in heavy-duty trucks, there will be no shaft. The axle in this particular situation works just as a steering part and as suspension. Several front wheel drive cars consist of a solid rear beam axle.

There are other kinds of suspension systems where the axles function just to transmit driving torque to the wheels. The angle and position of the wheel hubs is a function of the suspension system. This is normally found in the independent suspension seen in most new sports utility vehicles, on the front of many light trucks and on the majority of new cars. These systems still consist of a differential but it does not have attached axle housing tubes. It can be connected to the vehicle body or frame or also can be integral in a transaxle. The axle shafts then transmit driving torque to the wheels. The shafts in an independent suspension system are like a full floating axle system as in they do not support the vehicle weight.

Last but not least, with regards to a motor vehicle, 'axle,' has a more vague definition. It means parallel wheels on opposing sides of the motor vehicle, regardless of their mechanical connection kind to one another and the motor vehicle frame or body.