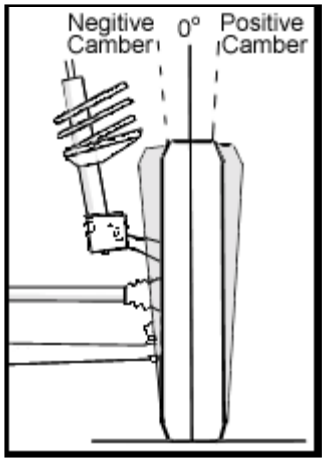
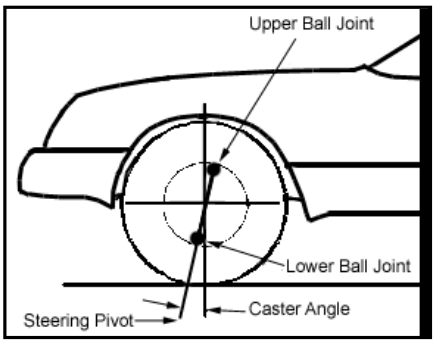
Wheel Alignment Systems

In its most basic form, a wheel alignment consists of adjusting the angles of the wheels so that they are perpendicular to the ground and parallel to each other. The terms used in the automotive industry to describe the angular position of the wheels are *Camber, Caster and Toe-in*. The camber and caster angles are referenced to the gravity vector, which makes them an ideal application for measurement using a *tilt sensor* or *inclinometer.*



Camber is the angle of the wheel, measured in degrees, when viewed from the front of the vehicle.



Caster is the angle of the steering pivot, measured in degrees, when viewed from the side of the vehicle.

The required angular measurement range for both camber and caster in most wheel alignment systems is normally +/- 7 degrees (+/-10 degrees maximum). With these angles being perpendicular to each other, and the limited angular sensing range, this is an ideal application for the *SP Series Dual Axis Tilt Sensor,* and/or the SPECTROTILT II *Dual Axis Electronic Inclinometers*. For manufacturers who require higher accuracy, the SPECTROTILT™ *(single axis) Electronic inclinometer* is the logical choice. The variety of input/output options and mechanical configuration will allow easy interface/retrofit into most existing systems, while the durable construction completes the overall package.