SPI Racing Wheels

SPI Racing Wheels - Physics 101

Motion is a progressive change of position of a body. Velocity is the rate of motion, that is, the rate of change of position. When the velocity is variable and constantly increasing the rate at which it changes is called acceleration, that is, Acceleration is the rate at which the velocity of a body changes in a unit of time, as the change is in feet per second. An example of such motion is found in wheels in a drag race application or acceleration out of a turn. When the motion is decreasing instead of increasing it is called retarded motion, and the rate at which the motion is retarded. An example of such motion is found in wheels in a braking application.

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The lighter the mass of rotating weight, the less energy is required to increase or decrease velocity. Wheels are subject to Rotary Motion with a decreasing acceleration as the vehicle accelerates to a top speed. A smaller diameter tire has less flywheel effect. It also lowers the center of gravity, making your truck turn with less outside forces acting upon it. Faster in, Faster out.

Steam Tractor

By using a heavier rim and larger diameter tire combination (series 40) the moment of inertia is moved out ward. The farther out the moment of inertia, the more force (HP) is required to begin rotation and increase velocity. Once the velocity of rotation as begun, it will require the same forces to reduce the wheel velocity. AND with all this momentum traveling in a given direction, Change in the direction becomes more difficult. Not only do you have to move the extra weight forward you also have to spin it up. Rotational weight is 4 times that of dead weight.

This is why we don't make a bead lock for racing. At the present time we are working on a 40 series bead lock for crawling and general use. I will keep you posted on their development.

Thanks

Rick