A-1.

The following definitions help to explain the principle of stability:

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: the PIT's axis of

: the slope of a surfa
hundred-foot horizontal di

: a PIT's r

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center of gravity times the load's weight is less than the vehicle's moment, the system is balanced and will

Photo from the Occupational Health and Safety Administration (OSHA)

A-5.

A-5.1. The axis of rotation when a PIT tips forward is the front wheels' points of contact with the pavement. When a PIT tips forward, the PIT will rotate about this line.

A-5.2. To determine the maximum safe load-moment, the PIT manufacturer normally rates the PIT at a maximum load at a given distance from the front face of the forks. The specified distance from the front face of the forks to the line of action of the load is commonly called the load center.

A-5.3. Although the true load-moment distance is measured from the front wheels, this distance is greater than the distance from the front face of the forks. Calculating the maximum allowable load-moment using the load-center distance always provides a lower load-moment than the PIT was designed to handle.

A-6.

A-6.1. The PIT's lateral stability is determined by the line of action's position (a vertical line that passes through the combined PIT's and load's center of gravity) relative to the stability triangle. When the PIT is

not loaded, the PIT''s center of gravity location is the only factor to be considered in determining the PIT's stability.

A-6.2. Factors that affect the PIT's lateral stability include the load's placement on the PIT, the height of