



U.S. CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON, DC 20207

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Mr. Thomas S. Yager
Vice President
Recreational Off-Highway Vehicle Association
2 Jenner Street, Suite 150
Irvine, California 92618-3806

Dear Mr. Yager:

On June 12, 2009, the U.S. Consumer Product Safety Commission (CPSC) staff received a canvass copy of the draft proposed American National Standard for Recreational Off-Highway Vehicles, ANSI/ROHVA 1-200X.* CPSC staff reviewed the draft and believes that the proposed standard does not adequately address vehicle stability, vehicle handling, and occupant retention and protection.

As of July 2009, CPSC staff has received reports of more than 100 fatalities involving Recreational Off-Highway Vehicles (ROVs). A number of very serious injuries that required medical treatment resulting in permanent disfigurement, including amputation and degloving, have also been reported. Many of these death and injury cases involved rollover of the vehicle. In addition, many involved unbelted as well as belted occupants who were ejected from the vehicle. Accordingly, CPSC staff believes robust stability, vehicle handling, and occupant retention and protection requirements are needed in the voluntary standard to address these deaths and injuries.

CPSC staff does not believe the requirements in Section 8. *Lateral Stability* are adequate to address vehicle rollover. The tilt table requirements for an occupied vehicle equate to a static stability factor (SSF) of .53 and the stability coefficient (Kst) requirement of 1.0 is for an unoccupied vehicle. The National Highway Traffic Safety Administration (NHTSA) has established a strong correlation between a vehicle's SSF (which is a ratio of its track width and center of gravity) and the risk of rollover in a single vehicle crash. CPSC staff believes the lateral stability requirements for ROVs should be in an occupied configuration and, at a minimum, should be in the 1.03 to 1.45 SSF range of comparable automobiles. CPSC staff recognizes that NHTSA studies these factors as they relate to on-road vehicles; however, staff

* The comments in this letter are those of the CPSC staff and have not been reviewed or approved by, and may not necessarily reflect the views of, the Commission.

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believes that off-road vehicles used in off-road conditions present an even greater vehicle rollover hazard.

CPSC staff believes the voluntary standard should also include steering characteristic requirements to ensure that ROVs predictably understeer in a turn to reduce the possibility of slide out and rollover. CPSC testing of ROVs to SAE J266 *Steady-State Directional Control Test Procedures for Passenger Cars and Light Trucks* indicates that some model ROVs exhibit severe oversteer while other model ROVs exhibit terminal understeer. Most passenger cars are designed to understeer because the vehicle tends to be more stable if a sudden change of direction occurs and drivers have more time to recover to this safer and predictable condition. CPSC staff believes ROVs should exhibit similar predictable understeering characteristics that will be familiar to and safer for drivers.

CPSC staff does not believe the requirement in Section 4.7 *Seat Belt* is adequate to address occupant retention, especially in a rollover scenario. The current minimum requirement for a 3 point seat belt does not adequately protect the occupant and does not address occupant limbs coming out of the vehicle. Occupant retention is imperative because these vehicles are used in an off-road environment and at a relatively high rate of speed. A number of factors, such as occupant seating location within a vehicle, physical side guards such as doors and shoulder guards, four-point seat belts, and technologies for increasing seat belt use, can improve occupant retention. CPSC staff believes a section dedicated to occupant retention should be developed for the voluntary standard.

Thank you for this opportunity to comment. CPSC staff looks forward to continued communication with ROHVA regarding the ANSI/ROVHA voluntary standard. If you have any questions or comments, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Caroleene Paul", written in a cursive style.

Caroleene Paul