

**E**xtrême sports involve the greater risks of death and injury. Often the best risk control measure is not to participate. However, for those who pursue the adrenalin rush, you can help mitigate the risk by using extreme equipment to gain a margin of safety.

Engineers control risk by designing equipment with a margin of safety. For example, if a hoist is nuclear certified to lift 1,000 lb, it must be able to handle a 3,000-lb. design load. The 2,000-lb margin gives the equipment and operator room to maneuver and ensures a safe lift over time.

The same principle applies to extreme sports. Whether you're

three Jeeps in a convoy working their way up Lake Como Road in Alamosa County. The member had not used his particular Jeep in over 2 years and was excited to see how his new "Ox Lockers" would perform. The positive traction devices would get their test this weekend on some of the most challenging trails in the area.

At or about 3:00 p.m., the member was making his fourth attempt over a very challenging rock obstacle with a steep grade below it known as "Jaws 2." According to the Colorado State Police, "*several people have lost their lives trying to climb the area.*" The member had been foiled during his first three attempts and even had to straighten his tie-rod after bending it in an earlier attempt.

According to witnesses, the member then decided to attack the Class V (most difficult) challenge on the "high side." The police report states, "*He got too close to the right side of 'Jaws 2.'*" The Jeep started to tip backward and he gave it more gas which caused it to flip over. The Jeep then started rolling and flipping down off the left side of the trail. It rolled and flipped for 190 feet before it crossed over the trail again and headed another 40 feet down an embankment. The Jeep came to rest on its left side against a large tree. The member did have his lap seat belt on and was not thrown from the vehicle. However, he had a severe head injury and died within about 10 minutes of the crash.

The member's roommate heard the tragic news first. The rest of the unit took the news equally hard.

From a safety standpoint, the tragedy could have been avoided if the member had not chosen to attempt the climb. This member, like many others, didn't live life backing

down from challenges. Thus, the fatal decision to challenge the trail for a fourth time is not what the rest of this article will focus on.

Instead, the rest of the article is about margin. The member's equipment was legal for off-road 4-wheeling, but *extreme sports require extreme equipment.*

First and foremost, the member died from a head injury due to striking a rock. Had the member been wearing a helmet, he may have survived that impact.

Secondly, the member was only wearing a lap belt. Witnesses described seeing his torso being thrown in and out of the protective roll bar cage. Had he been wearing a 5-point harness, he may have stayed within the protection of the roll cage.

Thirdly, the roll bar itself was factory and gave way being torn loose and bent up and forward of the passenger seat. It's hard to say if a stronger roll bar would have offered enough protection, but an aftermarket roll bar could have definitely been more robust.

Finally, his Jeep had been altered since he'd last used it. The "Ox Locker" positive traction device was cited by one friend as the main cause of the accident. Traction and torque were delivered where the normal slippage of the factory differential was expected. Using essentially new equipment to negotiate an obstacle that had taken life before reduced the member's margin of safety below what he needed to live.

In this sad tale, the decision to attempt the climb itself was disastrous, but the four factors just discussed eroded any margin of safety the member needed to survive. If you attempt extreme sports, don't reduce your margin of safety by using low quality safety gear. It's important to remember that you pay for what you get, and what you get may save your life. ▶

*"Several people had already died trying to climb the hill ..."*

jumping from perfectly good airplanes or racing cars, you need extreme equipment to give you an added margin of safety to control your risk.

The fatality discussed in this story involved a member who enjoyed the extreme sport of off-road 4-wheeling in his purpose-built Jeep. The story ended in tragedy, in part because the member did not leave himself enough of a safety margin to absorb the unexpected.

On a Friday last summer, the member left work with his supervisor to grab a tow bar so that he and a friend could tow his Jeep south to the beautiful Blanca Peak area near Alamosa, Colorado. They met other friends and camped under the stars that night anticipating a weekend of off-road fun with their 4-wheeling club. The member was known for his jeeping skills and instructed other enthusiasts. That Saturday there were



# Extreme Sports

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*As our readers should know immediately, this individual is jeeping without the proper safety gear. The military member in this story was killed participating in the sport without a five-point harness or a helmet. Had he worn them he would have likely lived.*