

**Presenter Bio:**

**Tom Pendley** served as Deputy Chief of Operations, Training and Special Operations, for the Peoria Arizona Fire Department before retiring in 2016 after 26 years of Service. He taught technical rescue for the Phoenix Fire Department for 15 years and was a technical rescue instructor trainer for the Arizona State Fire Marshal's Office for 10 years. Tom served 14 years as a volunteer with the Maricopa County Sheriff's Mountain Rescue Team, including 5 years as team commander. Tom has authored dozens of articles on rescue technique and training for Fire Rescue Magazine and other publications. Tom has conducted a number of informal backyard tests on rescue systems over the years. He holds a helicopter private pilot rating and is an avid mountaineer, river runner and powered paraglider pilot. Tom now works full time at the helm of Desert Rescue Research, which specializes in developing high quality technical rescue training resources. He currently lives with his family in Port Townsend, Washington.

**Abstract:**

Many tests have been conducted with the tandem prusik belay and other devices and techniques to prove capability of the device to arrest a rescue (two person) load. Most testing is conducted with just the device or system, and without a human operator, because human factors introduce such wide variation into the test. In fact, informal testing over the past eight years of the tandem prusik belay and other devices with human operators has yielded such wide results that human reaction time and human factors have been considered a liability in many widely accepted belay techniques.

We conducted informal testing with the Petzl ASAP and a human operator during lowering operations of loads over 200 kg. The test was designed to be as close to real world operations with the load in motion, and with a human technician tending the belay device, as they would in real life.