Innovative Driver Training with SkidCar
by Dale Stockton

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One of the more recent and effective developments in driver training has a strange name: SkidCar. Despite its odd appearance, funny name and significant price tag, SkidCar has demonstrated its ability to successfully train drivers to handle real world situations- even though it works primarily at speeds of five to ten miles per hour.

Most states and many foreign countries have at least one training facility using the equipment. The Santa Rosa Training Center in California has been so impressed by the SkidCar that they recently placed an order for the first SkidCar fire truck system. SkidCar isn't actually a car at all; it's a combination of mechanical and hydraulic components that look like a giant set of training wheels. Mounted to a patrol vehicle, the SkidCar system allows drivers to experience a type of training that helps develop experience in both avoiding and handling potentially hazardous situations.

SkidCar training is based on the premise that the driver will put a vehicle into situations that will subject it to physical forces, leaving the driver to exercise sound judgment to lower risk while maximizing behind-the-wheel skills. While most driver training programs focus on teaching a driver new or refined motor skills, SkidCar teaches drivers how to think.

Dane Pitarresi, the president of SkidCar Systems, stressed that SkidCar teaches drivers how to avoid situations. "A superior driver is one who uses superior knowledge to avoid situations that require superior skills," he said.

Pitarresi pointed out that driving skills are perishable, and that when training concentrates on skills the result is elevated confidence that can be problematic over time. Unless consistently maintained, high speed driver training by itself can actually get an officer into more trouble because the skills may not be there when they are needed.

"Unlike any other device out there, this device actually works the sphincter which in turn affects the other senses," Pitarresi said. "With SkidCar, it's the action of the driver that puts the car out of control or keeps it in control." Drivers quickly realize the key is driving with a strategy to maintain control, not regain it after it is lost.
A Unique System

SkidCar allows the instructor, who is riding with the student, to raise or lower the vehicle using a handheld hydraulic actuator control device. This results in an increased or decreased amount of traction, and thus control, that the driver experiences. Because of the relatively low speeds and high degree of instructor control, training can be done in areas much smaller than traditional skidpans and in a manner that virtually assures low risk training. In fact, SkidCar can even be used in areas with light poles or other obstructions because the instructor has the ability to drop the vehicle and regain total traction.

Since the amount of traction can be varied and the front and rear can be controlled separately, the instructor can provide a variety of experiences to the student. SkidCar can be used to teach how to avoid dry pavement skids, as well as snow, ice and mud skids. It also helps to deal with hydroplaning and teaches proper automatic braking system techniques.

Trainees are able to feel the dynamics of the skid as it occurs because of the relatively low speeds. This experience and the instructor's feedback help to develop psycho/motor skills as well as avoidance awareness.

J. Stanley Fant is a retired Alabama State Trooper captain and noted that his former agency has trained with the SkidCar system for several years for both recruit and refresher training. Fant now delivers the training for the Alabama Municipal Insurance Corporation (AMIC), which insures municipalities and has an obvious stake in driver safety.

The AMIC has been utilizing the SkidCar system since May of 2000 to train public safety personnel. Fant takes the SkidCar around the state to make it easier for the agencies to train their employees, and provides two hours of classroom training and six hours of driver training to nine students per day.

The training is conducted at low speeds and the students learn to feel what the car is doing, allowing them to make corrections before they lose control. "All the officers who have been in the class agree that they drive better after going through the course," Fant said.

The Clayton County, GA, Police Department (CCPD) has been using SkidCar since 1997 and has put about 300 people through the training. Major Doug Jewett, who oversees the training, said his department quickly realized the benefits of the training extended beyond skid control.

Jewett noted that SkidCar is a total system so students can see what kind of reaction is caused by their input to the vehicle. "The first time they realize how easy it is to get out of control, there is real value in that they see how quickly things happen when they aren't paying attention," Jewett said.

CCPD uses a training regimen that consists of four hours of classroom training, of which about one-half hour is specific to the SkidCar. Three students then spend four hours in the car with an instructor. Jewett noted that students seem to pick up a great deal from being in the car and watching other drivers make mistakes. The students have found the training to be enjoyable as well as beneficial.
"Sometimes they come in kind of apprehensive but they get in and see a demonstration as well as get to practice. Once they get a feel for it, they see that it's easy to accomplish but requires a lot of thinking to make it happen safely," Jewett said. "It really teaches them to think about what is happening and about keeping the car stable."

Jewett said he had questions during the instructor's course about just how effective the SkidCar training would be at higher speeds. He said that he and other students applied what they had learned in the SkidCar on the higher speed course and found that it was very effective. As a result, the CCPD provides SkidCar training then high-speed instruction.

"We've found that students utilize the SkidCar training during high-speed driving and their abilities improve much faster than with the high-speed driving alone," Jewett said.

Stressing that SkidCar is not just for skid training, Jewett said that agencies are limiting the potential of the system if they only look at SkidCar to teach skid recovery. "You're learning not to make mistakes rather than to recover from mistakes," he said. "Skid recovery will come naturally as a result of the training plus you develop the ability to keep the car stable and under control."

When asked if the system has proved itself, Jewett acknowledged that, at $40,000, SkidCar is expensive but well worth the investment. Despite the number of officers he has trained, he still enjoys being involved in the training because he sees such a great improvement in the students' driving ability.

"We have had people come to us and say that the training saved them when they had a situation and they realized they could keep the car under control. That makes it all worthwhile," he said.

Bob Wright, an instructor at the Martin County, FL, Sheriff's Office, has been impressed with the capabilities of SkidCar. Wright, however, found a use beyond driver training: accident reconstruction training.

Wright and his brother, a mechanical engineer, recently conducted an accident investigation training session and used SkidCar to give the officers an idea of post and pre-collision dynamics. Wright would define skid marks on the roadway and then talk about what motions a car would go through to produce such marks. The officers then experienced the vehicle dynamics involved in producing such roadway evidence.

"To talk about critical speed, skid, scuff is one thing, but to be able to have them experience it is entirely different. We're able to talk about what the driver did to induce such a response and what a driver could do to exacerbate or improve the situation," said Wright. "This is outside the realm of what SkidCar was designed to do but it's really helpful."

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**Student Response**

Corporal Steve Baber of the Albemarle County, VA, Police Department was contacted right after he completed an instructor course with SkidCar conducted at the Central Shenandoah Criminal Justice Academy. Although Baber had extensive driver training experience, this was his first exposure to the SkidCar.
Baber was impressed and said it was definitely superior to the skidpan training he had experienced. "With the hydraulic actuators, you can simulate a front end skid, rear end skid, plowing into snow, driving on ice and more," Baber said. "It's tremendous training. We want to incorporate a four hour segment for every officer in our department."

Baber pointed out that the training allows drivers to effectively identify their limitations and gives them exposure to a variety of conditions - something most departments don't have the resources to do. He also said he supports the use of additional students in the training car so that they can see and experience the feel of the car while learning from their mistakes.

In terms of comparing it with a traditional skidpan, Baber said he favors the SkidCar hands down. "The only other training I had was on asphalt sprayed with peanut oil. Unfortunately, you don't generally run into situations with peanut oil on the street," Baber said. "This permits slower, safer training and it's much more realistic. You learn to stay away from the problem as well as what to do when you get into it."

Even those who feel like they don't really need the training benefit, according to Baber. "Sometimes they say I just won't put myself in that situation but that just isn't an option," Baber said. "SkidCar puts them in that situation and helps them be prepared to deal with it."

Baber sees a value beyond training for public safety drivers: a place in high school driver training programs. He said he's been working with another instructor to explore the possibility of getting SkidCar training into the curriculum.

SkidCar's effectiveness and its potential for liability reduction have caught the eye of those responsible for insuring officers. Just as in Alabama, the Alaskan Municipal League Joint Insurance Association utilizes the SkidCar to teach driving skills to officers in three different locations throughout the state. Their efforts and the effectiveness of the program earned them national recognition from the Public Risk Management Association during an industry competition last year.

Because of the manner in which SkidCar training is presented, it offers a number of advantages over other forms of training. Total instructor control combined with training at slower speeds dramatically reduces the risk of bodily injury or property damage.

Although the initial purchase price of the SkidCar equipment is significant, it's much cheaper than trying to acquire land and pave it for a skidpan area. Even the environment benefits, as there is no need for soaps, chemicals or extensive use of water.

When it comes to risks involved in law enforcement, driving ranks near the top in terms of activities resulting in injury or death to officers. Sadly, it's the area where the most time is spent and too little training funds. Some agencies utilize high-speed tracks; some use skidpans created with oily liquids; and others tend to do very little and hope that an officer's basic driving skills will be enough.

The head-in-the-sand approach doesn't work when it comes to liability assessment time. Law enforcement managers have to be realistic and allocate sufficient time and resources to train their personnel. SkidCar presents law enforcement managers with a viable training option.

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