

# THE ASSOCIATION

Indiana Association of Certified Accident Investigators  
www.iacai.com



## Hidden Dangers in Crash Investigation

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By David McElhaney

It's been said that Crystal Methamphetamine is one of the most dangerous drugs ever created. It reaches and affects all walks of life from the gay/lesbian communities in the bigger cities, to teenagers in small Midwestern towns. No matter where it's at, it leaves devastation in its wake. With that said, why talk about this in a crash investigation-oriented newsletter?

Consider this: You are called to investigate a single car fatal crash in a remote section of your county, along a county road not known for being dangerous, or for that matter, well traveled. Evidence at the scene led the first arriving officer to assume it was a 'straight forward' crash; a crash 'simply' caused by a vehicle leaving the roadway and striking a tree, probably because the driver fell asleep at the wheel. Nothing else seems unusual or apparent until you stick your head inside the vehicle—what's that smell? A couple of cans of starter fluid are laying around on the floorboard, nothing completely out of the ordinary, you think. After all, it is an old piece of junk of a car..probably has problems starting. It's not until later on when the tow truck operator calls you about suspicious

items he found in the trunk; that's when things start coming together.

In the above mentioned crash, the investigators found that the young male driver of the vehicle was transporting a number of chemicals and appliances in the trunk of his car, all tied to the production of methamphetamine. Cans of starter fluid—punctured and drained of its liquid, but not its fumes; and anhydrous ammonia, kept in vessels not designed to hold its corrosive properties and now leaking from valves made from incompatible materials. What you have here is not only a probable cause for the fatal crash, but a potential EPA Superfund clean-up project!

Nearly every serious motor vehicle crash has some sort of hazard associated with it, hazards such as spilled gas and oil, that the investigator is aware of and knows (or at least, should know) not to get exposed to. Today, however, the investigator needs to be even more alert to the hidden dangers associated with the production and transportation of methamphetamine or its ingredients.

I won't preach to the choir about the dangers associated with direct contact with methamphetamine— it's just

plain dangerous, period. What may or may not be so apparent, however, is the danger associated with the handling of one or several of methamphetamine's precursors, such as anhydrous ammonia or starting fluid. Anhydrous ammonia, commonly used in farming operations to supplement nutrients in the ground, likes moisture and will seek out moisture when given the opportunity. Considering that humans are made up of approximately 70% water, we're a natural magnet for the stuff! When the mucus membranes are exposed to anhydrous ammonia, it causes severe burns due to its caustic nature when mixed with water from body tissue. If inhaled, causes burns to the lungs and suffocation due to pulmonary edema. Exposure to liquid anhydrous ammonia, which upon release has a temperature of  $-28^{\circ}\text{F}$ , will cause instant frostbite. Fortunately for us, anhydrous ammonia has a very distinct odor added to it, primarily for detecting leaks. For those of you who have never experienced the pleasure of the odor, it's one you'll never forget.

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**“The primary responsibility of the driver is to operate a motor vehicle safely”**  
 - National Highway Traffic Safety Administration Cellular Phone Use Policy

## NHTSA Releases Policy On Cellular Phone Use

The National Highway Traffic Safety Administration recently released its policy statement regarding the use of Cellular telephones while operating a motor vehicle. As one might guess, NHTSA's policy reflects a unfavorable light on cellular phone use during the operation of a motor vehicle. "The primary responsibility of the driver is to operate a motor vehicle safely. The task of driving requires full attention and focus," begins the Policy Statement. "Cell phone use can distract drivers from this task, risking harm to themselves and others. Therefore, the safest course of action is to refrain from using a cell phone while driving." In an FAQ based statement recently released

by NHTSA, research shows that driving while using a cell phone can pose a serious cognitive distraction and degrade driver performance. NHTSA estimates that driver distraction from all sources contributes to 25% of all police-reported traffic crashes.

In a blow to those 'blue-tooth' users, NHTSA also reports that research indicates that whether or not its a hands-free or hand-held cell phone, the distraction is significant enough to degrade a driver's performance, causing the driver to miss key visual and audio cues needed to avoid a crash.

NHTSA research did find, however, that equally distracting in some studies was when the driver was engaged in conversation with others in

the vehicle. In other, similar studies, however, it was found that the cell phone use outweighed the risks presented by talkative passengers. The report cited that one key fact was that the passenger can also act as a monitor to the driving situation as well as the driver, and pause for, or alert the driver to, potential hazards, where those on the other end of the cell phone conversation cannot.

NHTSA still recommends that the driver should always pull over in a safe location before making that cell phone call.

For more information, consult the NHTSA website at: <http://www.nhtsa.dot.gov>

## More About: Hidden Dangers in Crash Investigation

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Another chemical often used in the production of meth is starter fluid. In its container, its relatively safe, so long as its not exposed to flame, or you don't stick the nozzle in your mouth and pull the trigger, so to speak. However, most starter fluids have chemicals like ether in them. Ether is probably best known for its former use in the operating room as an anesthetic. It is highly flammable and, when exposed to in confined spaces, can cause general anesthesia. Prolonged exposure can cause respiratory failure and/or death. Early symptoms of ether exposure include irritation to the nose and throat, vomiting, and

irregular respiration, followed by dizziness, drowsiness, and unconsciousness. Exposure to liquid Ether can cause skin irritation. Ingestion of just 1 to 2 ounces can be fatal. There are several other chemicals used in the production of methamphetamine, including iodine, hydrogen peroxide, lye (Drano), and opened or broken lithium batteries, all of which can cause injury or harm when exposed to.

Officers who investigate motor vehicle crashes involving vehicles suspected of being involved in the transportation of these illicit chemicals should exercise extreme caution when examining. Suspected vehicles should be isolated and protected from contact, until

the materials can be removed by qualified personnel. Fire personnel should remain on standby until these items removed.

In summary, officers investigating motor vehicles crashes should be alert to the possibility that one of the vehicles involved may be carrying materials that will 'reach out and bite you.' Learning what the precursors are and how they are being transported by the meth 'cookers,' as well as who in your area deals with meth lab operations and cleanup, will aid you greatly and save both you and your department from costly mistakes, both financially and health-wise.

## Wheel Failures Reported On 2003-2005 Ford Police Cars

The National Highway Traffic Safety Administration recently announced an investigation into steel wheel rims used on Ford's Crown Victoria Police Interceptors from 2003-2005. The chief complaint is that the wheel rims are developing cracks or are breaking under normal to high performance use.

The Office of Defects Investigation (ODI) reported that the cracks or breaks occur in the weld which joins the rim and the wheel disc. The crack is not readily visible without removing the wheel from the vehicle,

and may not be visible without magnification. Users having defective wheels have complained of repetitive slow air loss, and steering wheel vibration, to name a few.

NHTSA also reported that Ford's remedy wheel, a replacement under recall #03V279 for the original faulty design, was responsible for approximately one-half of the 22 vehicles reported to NHTSA alleging steel rim fractures of one or more wheels. As a result, NHTSA opened Engineering Analysis (EA) #04034, which will identify and re-

view pertinent failure reports and consequences. ODI and Ford will also discuss details for conducting Audit analysis of failed wheels replaced under the new service action. NHTSA reported a determination will be made later as to whether Ford's service action is sufficient for addressing ongoing rim fractures before deciding to initiate a formal recall.

Those departments utilizing Ford CVPIs should be alert for continuing problems with low air pressure or repetitive air loss, or steering wheel vibration.



## States With Primary Safety Belt Enforcement Safer

- NHTSA Research Notes

A Recent study conducted by the National Highway Traffic Safety Administration found that states utilizing primary safety belt laws have a lower rate of fatal injuries than those states who don't. The study suggests that passenger

vehicle occupant fatalities in states with a primary safety belt law who were unrestrained is much lower than those in all other states during the time of this study, years 2000-2004, 51 % versus 65%. As far as age groups go, in the 16-20 y/o

age group, the percentage difference was more pronounced; 55% versus 73%. No other age group was as high as the 16-20 y/o age group. This should give even more reason to encourage new drivers to wear those belts.

## CAD Zone with LTI Basic 40 Hour Course

The Oak Lawn, IL, Police Department will be hosting a "CAD Zone with LTI Basic 40 Hour Course," Tuesday, June 13, through Friday, June 16, 2006 at the Oak Lawn Police Department, 9446 S. Raymond Ave., Oak Lawn, IL. This course is geared towards accident and crime scene investigators who produce diagrams from measurements obtained in the field

by hand or total station.

Equipment covered in this course will include the Crash Zone diagramming software, as well as Laser Technology's Mapstar Angle Encoder and TDS Recon data collector with Pocket Zone software.

This course will be hands-on, utilizing both classroom and field work.

Required equipment to attend the course includes the following: A laptop with Windows XP, 2000, or 98 SE, and a Pentium III or higher processor with a minimum of 32 MB of memory; a traffic vest or jacket.

Cost for the course is \$299. To register, contact Joe M a n g e s @ [joe@crashconsulting.com](mailto:joe@crashconsulting.com)



## Upcoming Crash Investigation Training

Northwestern University's Center for Public Safety recently posted the following training courses for those interested in Accident Investigation and those who have been in it for awhile but might need some refreshing:

6/19-20/2006  
Traffic Accident Reconstruction Refresher Course  
\$300

This is a two day course designed for anyone who has successfully completed the traffic accident reconstruction

course(s) or similar programs, but may need to review reconstruction calculations or newer technologies.

9/11-22/2006  
Accident Investigation I  
\$1150

9/25-10/5/2006  
Accident Investigation II  
\$

10/9-13/2006  
Basic Physics & Mathematics Workshop  
\$875

This course review mathematics and elementary physics used in traffic accident reconstruction. Basic Physics and Mathematics Workshop is designed as a refresher course for the student who has studied these concepts in the past but may not have used them for years. Students will find this course valuable in building a foundation for accepted theories in accident reconstruction courses.

## IACAI Needs Members/Agencies Help

Over the past year or so, the Indiana Association of Certified Accident Investigators has attempted to garner interest in conducting an *At-Scene Accident Investigation Course*. The initial response has been good, however, when it came time to put on the course, the interest suddenly disappeared. The Association still wants to

put on a course but needs to have input from its members, their agencies, and those interested in attending a class. To put on such a class requires a considerable amount of planning, including location, cost, and length of class. The At-Scene class that is being considered would run approximately one to two weeks, giving the stu-

dents enough information to properly conduct a basic crash investigation and certification as an At-Scene Investigator. If you know of anyone who would be interested in taking a class in At-Scene Accident Investigation, please contact any one of the Association's board of directors via our website at: [www.iacai.com](http://www.iacai.com).

## IACAI News

Central IACAI Board member Brad Siefers was recently called to service and was deployed to Iraq. We wish him a safe and successful mission.

The IACAI Board, at Siefer's recommendation, has named John Kovachs, of the Bloomington Police Department, as interm Central Director. Welcome, John!

Any IACAI member interested in placing a shirt order

should contact North Director Kip Shuter prior to placing the order. Some of the shirts which were available are no longer available, others are seasonal. A current order form has not been made available as of the publication date for this newsletter, however, as soon as one becomes available, we will make our members aware of it.

Just remember, if you or a colleague have any ideas for a seminar which you would like the IACAI to put on,

please let one of the board of directors know. We try and solicit ideas for seminars at the bottom of our seminar evaluation forms. Sometimes, however, the ideas for new seminars don't come until later! Any idea can be a good idea; the only prerequisite is that the seminar should be something that we can do in a day - unless you have several ideas that can be tied into a multi-day seminar. We are open for and welcome any suggestions, so don't wait! Let us know what's on your mind.

## IACAI Skill Review

This edition of the IACAI Skill Review deals with tire examination.

1. The zones of a tire include the Crown, the Sidewall, and the:
  - A. Innerliner
  - B. Body ply
  - C. Beads
  - D. Belts
  
2. Which of the following is not part of the common markings found on the sidewall of most domestically produced tires?
  - A. Tire size information
  - B. Uniform Tire Quality Grading System
  - C. Manufacturer's specific tread depth
  - D. Number of plies and ply material
  
3. The most common tire designation system currently used in the US is called the:
  - A. European Metric System
  - B. P-Metric System
  - C. Millimetric System
  - D. Dewey Decimal System
  
4. A part of the common tire designation system displays information with regards to the linear distance between the outside sidewalls of an inflated tire without any load. This designation is called the:
  - A. Section Height
  - B. Section Width
  - C. Tread Width
  - D. Rim Width
  
5. The radius of the tire/wheel assembly that is not deflected under a load is called the:
  - A. Deflection
  - B. Free Radius
  - C. Loaded Radius
  - D. Aspect Ratio Radius



**Answers will appear in the next issue of the Association.**



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## **Seminar Announcement**

*The Indiana Association of Certified Accident Investigators will be sponsoring a seminar on*

**“Grant Applications (AM)**

**&**

**Autopsy Issues (PM)”**

June 21, 2006 0900-1500 hrs

Indianapolis Police Training Academy.,  
10th Street @ Post Road, Indianapolis, IN

Instructors: Dan Jeffries, Indiana Criminal Justice  
Institute; and

Dr. Dean Hawley,

Cost: \$25 for IACAI members; \$50 for non-  
members

No advanced registration is required.

**Please plan to attend!!**

Questions regarding this seminar may be directed to  
IACAI President Don Harris

email: [donhar232@aol.com](mailto:donhar232@aol.com)

The Association is published quarterly as a service to members of the Indiana Association of Certified Accident Investigators.

Articles submitted are the responsibility of the author; the IACAI assumes no responsibility as to an article's content.