



The Association

October, 2014

Issue 2, 2014

November Seminar **November 19, 2014** **9:00 a.m. - 3:00 p.m.**

A.M. – Reconstruction of the January 2014 I-94 Multiple Fatality Pile-Up

P.M. – Legal Update for the Crash Investigator

Don't Miss It!!

Sign-in begins at 8:30am

Huntington County Sheriff's Department Training Room, 332 E. State Street, Huntington, IN 46750

Cost \$50 for members/\$75 for non-members

No pre-registration is needed

Legal Ramblings

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Inside this Issue:

- Legal Ramblings
Page 1
- Crush Deformation Jig
Page 2
- WREX 2016
Page 3
- Upcoming Trainings
Page 4

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One of the most difficult areas of criminal law was (note the use of past tense) the distinctions between motorcycles, mopeds, scooters, and other types of two wheeled modes of transportation. Adding insult to injury, each category has, in the past, been treated differently in terms of licensing, safety equipment, number of passengers, and registration. Relief for the road officer arrives January 1, 2015.

One of the few good things from the Indiana Legislature regarding criminal law this legislative session is the consolidation and clarification of this arcane and exhausting area. The new year brings astounding simplification.

The greatest simplification is reduction to only two categories for all "motor driven cycles": Class A motor driven cycles and Class B motor driven cycles. The distinction is equally simple: if the engine is greater than 50 cc and is capable of speeds in excess of 35 m.p.h., then it's Class A, and if it doesn't meet those two benchmarks then it's a Class B.

All motor driven cycles, that is both Class A and Class B, must now be plated and registered with the Bureau of Motor Vehicles.

Operators of Class A MDCs must have drivers licenses with an MDC endorsement and must have insurance on the vehicle. However, operators of Class B MDCs

don't need insurance, but must have an identification card with an MDC endorsement and must be at least fifteen (15) years old.

As I said, simple.

Because it's a new law, some wrinkles will have to be worked out by the courts. For example, because all MDCs must be plated and registered, does this spell the end of HTV moped operation because they're unable to get vehicles registered? Stay tuned to this bat-channel for future updates.

Stay safe and keep the faith.

Tim

Crush Deformation Jig

Dave McElhane y



**Crush Deformation Jig,
with measuring rods**

Okay, so that's all done, but what do I use for the measuring rods?

When I go about attempting to determine crush from a motor vehicle, I normally use a rectangle built out of PVC piping and outline the vehicle in question. I lay a tape along the left front and left side of the vehicle and map out the sides using a PVC pole with a level and a metal tape. This takes time to map, especially if I'm by myself, but it does a good job of getting the information I need. Something I've thought about making but never got around to doing is the Crush Deformation Jig. For those of you who are not familiar with one, the Crush Deformation Jig, like the one shown to the left, is a rather simple device. The jig utilizes 2-3 posts, 6 measuring sticks, and a cross piece to support the measuring sticks. The jig is placed at the position where the front, rear, or side of the vehicle should be, and the measuring sticks are positioned along the crush path. This allows the crash investigator the ability to measure the entire crush width and the depth of the crush. It also gives the investigator a great visual on just how much crush the vehicle suffered. After much thought and a few bucks worth of supplies, I set out to create my own

version of the crush deformation jig. I decided to make my jig out of PVC piping. PVC piping is light but sturdy; it's easy to work with and best of all, it's cheap. I wanted to make a jig that would extend the entire width of a vehicle – this means something at least 68-75 inches wide. Take a PVC pipe that long and see what happens when you suspend it between two posts...it sags, badly! However, two 4 foot sections of piping and an extra post in the middle will take care of that problem.

Each 4 foot section gets holes drilled every three inches (my choice; you can make it however wide you prefer...) In order to do this, you must first find the center along the entire length of the section, then place a mark every three inches. Once that is done, carefully drill a 21/64" hole through each mark made. Take your time...you want a rather straight line of holes.

Once the sections are done, you can build the jig by using 'T' connectors and various sizes of PVC piping in order to make the height the size you desire. Using 'T' connectors at the bottom of the jig along with 2-3 foot sections of pipe will

give you a very sturdy rig.

Okay, so that's all done, but what do I use for the measuring rods? Good question! My first thought was to use wood dowel, but I figured that after sitting in my truck through the various seasons and through crappy weather conditions, I would end up a lot of silly-straw looking wood dowels after a while. I also thought about using some aluminum rod, but at a cost of \$3 or more for a 3' section of rod, I figured that was too much. I finally decided on fiberglass yard markers used to mark the locations of driveways and objects during the winter. I picked up 8 markers on sale at Menards at the cost of \$1.99 each – even better because there was a two-for-one sale going on! These markers are colored fluorescent yellow or orange and are 4 feet in length. They are 5/16" in diameter, which fits the 21/64" hole drilled out earlier just great.

I took the fiberglass rods and marked one-inch spaces along the length of the marker. The one-inch spaces would allow me to get a good idea of how deep the crush is without using a tape. (continued on Page 3, Crush Jig)

One of the most unique events to happen in crash investigations will happen on May 2 thru 6, 2016, in Orlando, Florida! WREX 2016 promises to be a week of experimenting and learning, of networking and sharing. Details are not complete, but many of the pieces are in place. I.A.C.A.I. President Kip Shuter and Vice President Dave McElhaney are involved with committee work for the seminar. Nearly all of state crash investigators' associations have gotten involved, and I.P.T.M. is among the sponsors. Northwestern University Center for Public Safety is also involved.

WREX 2016!

Now is the time to start planning to attend this event! Registration will be \$645.00, and hotel rooms will be available at \$112.00 per night

Crush Jig, continued from Page 2

. I then taped every other inch and painted it white, which gave it a nice contrast with the orange. After making sure the paint was nice and dry, I coated the rods with a thin clear coat in order to protect the rods from years of wear and tear.

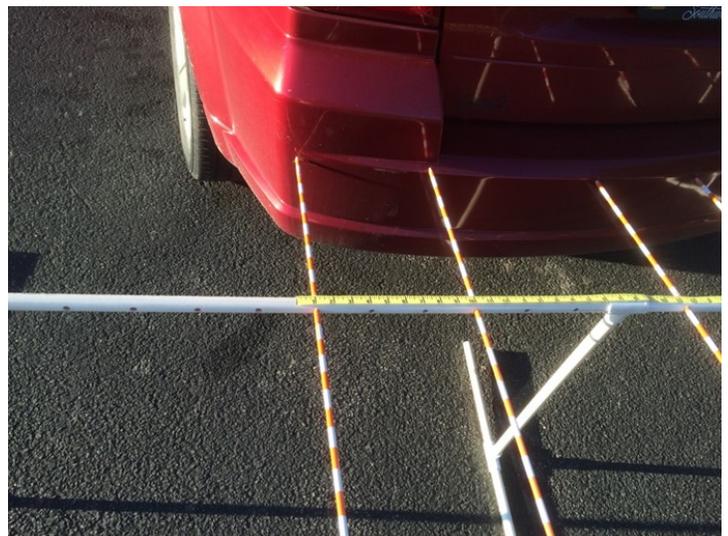
The great thing about using PVC pipe is that you can cut the pipe to the length you need, add pieces when you need to and alter things as you see fit. If I desire, I can use just one section of my jig and measure narrow angle crush, such as the damage from a utility pole, or both pieces to map out the entire front end of a damaged vehicle. You can cut various lengths of PVC piping to set the height as needed for different situations. I would suggest using

sandbags or like weights on the feet – even as light as the fiberglass rods are, they still weigh enough to cause the rig to be a little unsteady. Additionally, you'll want to make sure that the 'T' connectors fit snugly on the ends of the support sections so that your rods don't drop or fall. A tape placed and secured on the top of the cross section(s) of the jig will allow you to get an accurate width of the crush damage.

So, if you're looking for an afternoon project and have approximately \$20-25 bucks in your pocket, and have a need for a crush jig, this is the project for you!!

Dave McElhaney, Vice-President, IACAI

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I.P.T.M. UPCOMING TRAINING

Investigation of Motorcycle Crashes
Jacksonville, FL 11/10–11/14/2014 \$795

Event Data Recorder Use in Crash Reconstruction
Greensburg, PA 11/17–11/21/2014 \$595

At-Scene Traffic Crash/Traffic Homicide Investigation (Online)
01/19–03/29/2015 \$825

Traffic Crash Reconstruction ,
Cape Coral, FL 02/16–02/27/2015 \$850

At-Scene Crash/Traffic Homicide Investigation
Lawrence, IN 02/16–02/27/2015 \$850

Advanced Traffic Crash Investigation
Lawrence, IN 03/16–03/27/2015 \$850

Event Data Recorder Use in Crash Reconstruction
Cape Coral, FL 03/23–03/27/2015 \$595

Traffic Crash Reconstruction Lawrence, IN
04/20–05/1/2015 \$850

Special Problems in Crash Reconstruction, Clearwater Beach, FL
05/18–05/22/2015 \$650

NORTHWESTERN TRAFFIC SAFETY UPCOMING TRAINING

Crash Investigation 1 Online—Fall 2014—\$975

Crash Investigation 2 Online—Fall 2014—\$975

Crash Reconstruction Refresher—
12/02-12/04/14 \$525

Crash Investigation 1 Online—Spring 2015—\$975

Crash Investigation 2 Online—Spring 2015—\$975

Crash Reconstruction 3—03/02-03/06/15 — \$875

Crash Investigation 1—03/16--03/27/15—\$1,050

Crash Investigation 2—03/30--04/10/15—\$1,050

CDR Technician Level 1—04/02/2015—\$110

CDR Technician Level 2—04/03/2015—\$165

CRD Data Analyst—04/06-04/10/15—\$675

Vehicle Dynamics—04/13-04/17/15—\$800

Crash Reconstruction—04/20-05/01/15—\$1,100

*All courses except Online courses are at
Northwestern Center for Public Safety*

The IACAI is a non-profit organization dedicated to the professional education and training of crash investigators and reconstructionists throughout the State of Indiana. Training is open to all crash investigators, employed or retired by a public safety agency.



It's Your Association

When the training schedule is established for the new year, the goal is to select topics that are current, pertinent and useful. The board of directors

needs to hear from the membership as to what trainings will fulfill those goals. Also, if you have access to a good training facility, we would like to hear about it.

Your association works for you!