



# CALIFORNIA ASSOCIATION OF ACCIDENT RECONSTRUCTION SPECIALISTS

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## Schedule of ACTAR Accreditation Examinations

There's no better way to demonstrate your qualifications as a reconstruction professional than by earning your ACTAR accreditation. The following is a list showing upcoming test dates and locations, so you too can earn your accreditation. Deadlines for registration are approximately 3 weeks prior to the test dates.

Date	Location
May 14, 2006	Augusta, Maine
May 19, 2006	Salem, Oregon
Jun. 4, 2006	Las Vegas, Nevada
Jun. 16, 2006	Kansas City, Missouri
Jul. 16, 2006	Phoenix, Arizona
Sep. 9, 2006	Bloomington, Illinois
Sep. 17, 2006	Houston, Texas

You may contact Al Baxter, ACTAR Administrator by phone at (800) 809-3818 or at [www.actar.org](http://www.actar.org).

## CA²RS Contact Information

### General Information

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# 1<sup>st</sup> Quarter Training Review

## Anti-Lock Braking Systems

By: Joel Salinas, CAARS Board Member

The first quarter CAARS Training on “Anti-Lock Braking Systems and Related Physical Evidence”, was taught by Alan Coulter and Wesley Vandiver. Those members attending the Northern California training in Vallejo had to bear the cold conditions of the Solano County Fairgrounds classroom since we could not get the heating system to work.

The presenters came prepared with a thorough PowerPoint presentation. The training handouts included a copy of the slides used in the presentation as well room for taking notes and the last page was packed with references for those in search of supporting documentation. I find these handouts very useful for following along as well as documenting any other important information that is disseminated during the training.

Wes started the training with a review of basic physics addressing scalar and vector quantities as well as an overview of forces and friction. He covered the Friction Circle as it relates to traction limits under constant velocity, moderate acceleration, aggressive cornering and maximum braking.

Alan started his portion by giving us the history of ABS systems starting with Bosch developing the technology in the 1930's and eventually using it in the first production vehicles in the 1970's. He pointed out that the advancements in computer processing have made ABS increasingly efficient.

Alan discussed mechanical inspections and the importance of documenting and photographing physical evidence. There is an abundance of useful published information to consider, ranging from the manufacturers manuals and specialized service manuals, to general repair manuals. One thing to keep in mind is that the person doing the mechanical inspection needs to have the mechanical aptitude to explain the inspection process as well as any

deficiencies they may encounter. Alan cautioned about stepping outside the scope of your expertise.

Alan covered in detail the different type of service brake systems as well as the different ABS systems. Alan reported that the wheel speed sensor accounts for 99% of the problems when the ABS light comes on. The wheel speed sensor can be affected by a broken tooth on the ring, warping of the ring or excessive run-out can be caused by a loose wheel bearing, all of which will lead to a trouble light. A change of wheels or tires that differ from the manufacturer's specifications as well as improper tire pressure can affect the braking system as well.

Wes Vandiver's afternoon presentation provided some information on controlled testing of ABS equipped vehicles. He tested a 2005 Ford Crown Victoria on dry pavement. With ABS activated, at 32 mph he got an “f” value of .87. With the ABS deactivated, locked wheel deceleration, at 34 mph he got an “f” value of .85. He provided some photographs that showed the presence and the absence of ABS markings. With straight line braking, ABS activated, there were no visible markings with a reported “f” value of .86. However, with ABS activated and the vehicle negotiating a right curve, there were markings presumably caused by the left tires. Wes did a braking test on hard packed dirt, what he termed as a “construction graded surface”. With the ABS deactivated, at 36 mph, the “f” value was .61. The same surface with ABS activated produced an “f” value of .42, which surprised the audience.

The training wrapped up with a review of the Anti-Lock Braking Systems:

- ✓ ABS was designed to allow vehicle control while braking.
- ✓ ABS may or may not reduce overall stopping distance.
- ✓ ABS braking will leave physical evidence on a roadway (but it may be difficult to locate).
- ✓ ABS systems are not as efficient off-road as they are on pavement.

All in all, it was a very informative day!

## 2005 Vehicle Code Update

By: Kent E. Boots, Rudy Degger & Assoc., Inc.

This year I was unable to attend the 2005 Vehicle Code Seminar, but I received a PDF version of the traffic digest, which can be downloaded from [www.aaa.com/newlaws](http://www.aaa.com/newlaws). I reviewed the digest and thought that I would highlight those changes in the law, which could be factors in traffic collisions. All changes to the vehicle code were effective January 1<sup>st</sup>, 2006. From an enforcement standpoint the only significant changes had to do with “pocket bikes”.

The following sections were added to the Vehicle Code as the result of Assembly Bill 1051:

- ❑ VC 473 defines a “pocket bike” as a two-wheeled motorized device that has a seat or saddle for the use of the rider, that is not designed or manufactured for highway use, but does not include an off-highway motorcycle.
- ❑ VC 9955 requires manufacturers of pocket bikes to affix a disclosure statement on pocket bikes specifying where a pocket bike is prohibited from operating and specifies the wording of the required disclosure statement.
- ❑ VC 21720 prohibits the operation of a pocket bike on a sidewalk, roadway, or any other part of a highway, or on a bikeway, bicycle path or trail, equestrian trail, hiking or recreational trail, or on public lands open to off highway motor vehicle use.
- ❑ VC 21721 authorizes law enforcement to impound a pocket bike that is being operated illegally.

Additional information, including bill text, complete analysis and committee and floor votes, may be found at [www.assembly.ca.gov](http://www.assembly.ca.gov); [www.senate.ca.gov](http://www.senate.ca.gov) or [www.leginfo.ca.gov](http://www.leginfo.ca.gov) .

## 2006 Conference Announcement

CAARS is pleased to announce that we have secured a location and dates for the 2006 Fall Conference, “Crash Reconstruction - Start to Finish”. The conference will be held at the Embassy Suites Lake Tahoe Resort.



We will hold an ACTAR Prep Class on Tuesday November 14th, and we will host an ACTAR exam on Wednesday November 15th. The conference will run Thursday November 16th through Saturday November 18th. The Conference will be held at the Embassy Suites Lake Tahoe Resort in South Lake Tahoe, CA. It's still too early to register or make room reservations, but we just wanted to make sure that you put the Conference on your calendar. More information will be on the CAARS web site as it becomes available.

Embassy Suites Lake Tahoe Resort  
4130 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96150  
[www.embassytahoe.com](http://www.embassytahoe.com)



## Blurbs from the Board



Gordon Gray  
Chair



Kent Boots  
Vice Chair



Karen Haverkamp  
Director



Jim Holder  
Director



Chris Kauderer  
Director



Joel Salinas  
Director



Tami Tavarez  
Director



Rudy Degger  
ACTAR Rep.



Kevin Cassidy  
Membership Chair

**D**ear **CA<sup>2</sup>RS** Members,  
**Greetings to all!** We've completed our first Quarterly Trainings for 2006, "ABS Brake Systems & Related Physical Evidence." I'd like to express my gratitude to those persons and agencies responsible for these training sessions. Our Northern California training was hosted by the Vallejo Police Department; all preparations were handled by one of our newest board members Joel Salinas. Our Southern California training was hosted by the Garden Grove Police Department; these arrangements were handled by James Holder.

The presenters, Alan Coulter and Wes VanDiver did a magnificent job presenting this topic. Thanks to Vice-Chair Kent Boots for arranging the topic and making the speaker preparations.

**May/June Training:** Our next training topic is "Traffic Collision Photography." The Northern training will be held in Stockton at the Radisson Hotel, Thursday, May 4th with the Southern training being scheduled in Riverside, Wednesday, June 14th. Our presenter is Will Funk, a retired officer from Orange County, with a strong background in collision investigations. Mr. Funk currently is an instructor of Photography at Claremont College.

**TRAINING CRUISE, May 19-22, 2005:** Bon Voyage to those members who are headed out to sea for the CA<sup>2</sup>RS Cruise. This years training cruise topic "Speed from Skid & Working with Energy" will be a marvelous presentation. We'll be learning from two of the best in the business, Kerry Berg and Steve Haverkamp. Karen Haverkamp, our marvelous, creative, and breathtaking Cruise Director has a great deal of surprises in store for all who are attending. This is a spectacular opportunity to network, learn, and relax. To those attending, enjoy your learning experience on the High Seas!

**Elections:** Have you been thinking of getting into politics? Does the idea of having a "say" in how things are prepared and representing your voting members sound interesting? Now's the time to begin thoughts about the Board member elections, the election will take place at the Fall Conference in November. Let this be your stepping stone to higher office!

There are three Board positions up for election this year, my Board seat of (Chair) and the Board seats of Karen Haverkamp and Jim Holder. I'd like to encourage everyone who feels he or she can contribute to the growth and path of the association to put their name on the ballot. Talk to your Board members and see what's involved. You can make many meaningful

contacts and have the opportunity to lend a hand to organize training for your fellow members. If you'd like to put a "candidate's statement" into the Skidmarks prior to the election, it can be arranged and is encouraged.

***THE FUTURE & BEYOND:*** We have a full training calendar already lined up for this year. The survey from the 2005 Conference related to future training topics has some wonderful suggestions we'll be utilizing for potential training sessions. If you have a training topic you'd like to see presented at a quarterly training please share your idea with me or one of the other board members, we welcome your comments. Or, if you'd like to host one of our quarterly trainings contact me.

***CONFERENCE 2006:*** Mark your calendars for November 16-18, 2006, Tahoe here we come. We are in the planning stages of our 2006 Conference. Kent Boots and Karen Haverkamp

will be our co-chairs once again. Our host hotel will be the Embassy Suites Hotel, right at State Line. Our focal point will be "Crash Reconstruction - from Start to Finish." If you have a few thoughts or have any extraordinary talents or know of anyone who would like to present, now is the time to move ahead with your ideas by sending an e-mail to [vice-chair@ca2rs.com](mailto:vice-chair@ca2rs.com).

Hope to see everyone take advantage of the training by attending quarterly trainings, in 2006.

As always, the Board welcomes any suggestions regarding future training topics or how to improve the organization.

**Gordon W. Gray**

CA<sup>2</sup>RS Chair

**THE CURRENT CAARS BOARD OF DIRECTORS HAS HAD SEVERAL DISCUSSIONS ABOUT WAYS TO KEEP THE MEMBERSHIP BETTER INFORMED ABOUT THE BOARD'S ACTIVITIES. AS YOU CAN SEE LISTED BELOW UNDER *OLD BUSINESS*, THE BOARD HAS DECIDED TO PUBLISH A CONDENSED VERSION OF THE MINUTES FROM EACH MEETING IN THE QUARTERLY NEWSLETTER. THIS IS THE FORMAT THAT THE BOARD AGREED UPON AND WE WILL MAKE EVERY EFFORT TO PUBLISH THE BRIEFED MINUTES IN THE FIRST NEWSLETTER FOLLOWING THE MEETING.**

Briefed Minutes  
CAARS Board Meeting on February 4, 2006

- Call to Order
  - Present:
    - Voting Members – Karen Haverkamp, Chris Kauderer, Joel Salinas, Tami Tavarez
    - Non-Voting Members – Rudy Degger
  - Absent:
    - Voting Members – Gordon Gray, Kent Boots, Jim Holder
    - Non-Voting Members – Kevin Cassidy
  
- Old Business
  - Motion to publish briefed minutes of board meetings in the Quarterly Newsletter.  
Motion carried unanimously, 4-0.
  - Treasurer's Report
    - Rounded off account balance of \$13,000.
    - *(This is average for this time of year.)*
    - Motion to approve money to be spent on Tax review and filing expenditures.  
Motion carried unanimously, 4-0.
  
- ACTAR Report
  
- Membership Report
  - 274 current members. 81 non-renewals.
    - *(This is average compared to previous years.)*
  
- New Business
  - Discussion about the 2006 Conference, Policy Manual, and 2006 Quarterly Training
  
- Adjourn Meeting

## CRASH!



The source of this photo is unknown but as you can see it is a collision captured during the impact. Most likely it is from one of the redlight camera systems cities are now using for enforcement. If anyone has an interesting collision reconstruction related photograph that could be published in a future issue of Skid Marks, please forward it to Jim Holder at [editor@ca2rs.com](mailto:editor@ca2rs.com) or to [james@jchcollisionanalysis.com](mailto:james@jchcollisionanalysis.com).

### Training for 2006

Dates	Locations	Topic	RSVP
May 4, 2006	Stockton, CA	Traffic Collision Photography	Gordon Gray 209-937-7292 <a href="mailto:gordon.gray@ci.stockton.ca.us">gordon.gray@ci.stockton.ca.us</a>
Jun. 14, 2006	Riverside, CA	Traffic Collision Photography	
July 2006, TBA	Northern California, TBA	Restraints, Airbags, & Child Restraints	TBA
August 2006, TBA	Southern California, TBA	Restraints, Airbags, & Child Restraints	TBA
Nov. 16-18, 2006	Embassy Suites 4130 Lake Tahoe Boulevard South Lake Tahoe, CA 96150	Fall Conference – Crash Reconstruction, Start to Finish	Registration will be available via the CAARS website

Check the website at [www.ca2rs.com](http://www.ca2rs.com) for updates on the training. Remember, if you have suggestions for training topics, particularly if you know of a possible presenter for the topic, please contact a board member. 🚗