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***Purpose of ACRA: To have a more profitable and better managed collision repair business through education.***



**Arkansas Collision Repair Association**

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October/November 2011

**SEPTEMBER EDUCATIONAL PROGRAM**

The September Educational Program was presented by Ms. Terri Beiner, Associate Dean and Professor of Law, UALR School of Law.

Title VII is the part of the Civil Rights Act of 1964 that addresses discrimination in the workplace. It prohibits discrimination of employees on the basis of race, color, religion, sex or national origin. The emphasis of this program was on sexual harassment, which the courts started applying to the act in the late 1970s. Sexual harassment is intimidation, bullying or coercion of a sexual nature, or the unwelcome or inappropriate promise of rewards in exchange for sexual favors.

While it is important to avoid legal problems, it is also important because discrimination can adversely affect your business. Your reputation in the community with customers and vendors can affect your business indirectly. But decreased work performance and increased absenteeism directly impacts your shop's production. Most shops must work as a team and conflict will decrease output. If there is a general feeling at the workplace that harassment is permitted it can undermine ethical standards and discipline in general and a loss of respect for and

trust in the shop owner or manager that turns a blind eye to the problem.

Your employee handbook should include a person or persons to report sexual [and other] harassment. There should be someone other than an employee's supervisor available to receive the report as often times it is the supervisor themselves that is the subject of the report.

Retaliation and backlash against a victim (complainant) is common. Victims are labeled troublemakers or worse and hostility and isolation can occur. Retaliation itself is grounds for a lawsuit, even if the original complaint was without merit.

The federal law has a requirement of a number of persons employed at the business to qualify. Most collision repair facilities in Arkansas will fall far below the required number. However, there are several tort [wrongful act] claims available in Arkansas. The federal law limits awards to \$300,000 compensatory damages, and attorney's fees, and in some cases punitive damages. The state claims have no limit.

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**OCTOBER EDUCATIONAL PROGRAM**

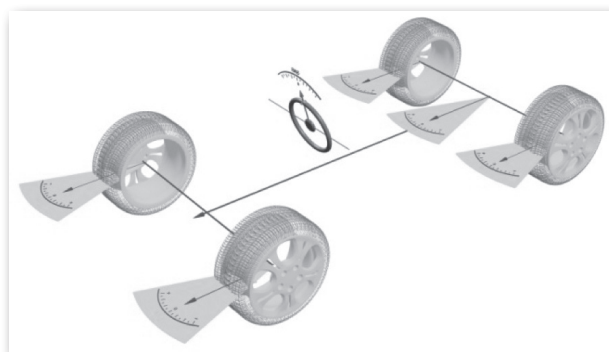
The October Educational Program was presented by Mr. Don Coombes and Mr. Ron Racine of Snap-On Equipment. Mr. Racine is the Manager for Product Training for North and Latin America. The topic was Electronic Stability Control which will effect the way we repair vehicles in a very large way.

**What is ESC?**

Electronic stability control, or ESC, uses several sensors to improve vehicle control under certain conditions. Wheel speed sensors, yaw sensors, rotation rate sensors, and steering angle sensor (not steering wheel angle) are used to report the "Steady state" of the vehicle.

**WHAT TECHNOLOGY DOES IT USE?**

The ESC system employs ABS technology as its basis for vehicle control. ESC adds a control unit that monitors steering angle and vehicle rotation around the vehicle's vertical axis. The ESC can differentiate between skidding and spinning around and take the necessary course of action to restore the vehicle's behavior.



The ESC control unit receives information from the steering angle sensor and yaw rate sensor and determines if the vehicle is about to skid. It also receives information from the rotation rate sensor and determines if the vehicle is about to spin out or rotate about its vertical axis.

*continued on page 2*

## HOW DOES IT WORK?

The angle formed by intended direction of the vehicle and the actual direction is called the float angle. The ESC main function is to maintain a steady state condition by reducing the amount of the float angle. The ESC unit accomplishes this by applying the brake on a certain wheel, front wheels only, rear wheels only, left front and right rear, whichever wheel needs to be slowed down. In addition, the ESC may send a message to the engine controller and reduce the engine torque as well as down shifting the automatic transmission.

Vehicles equipped with electronic brake distribution do not have a brake force proportioning valve the force is directed to the wheels by the control unit. The unit can decrease the brake force on one wheel to prevent lock-up and simultaneously increase the brake force on the other wheel to reduce the vehicle's speed.

### How ESC helps drivers maintain control:

A driver loses control when the vehicle goes in a direction different (actual direction) from the one indicated by the position of the steering wheel (intended direction). This typically occurs when a driver instigates a hard turn. Then the vehicle may understeer or oversteer. When a vehicle understeers it turns less than the driver intended and continues in a forward direction because the front wheels have insufficient traction. When it oversteers it turns more than the driver intended because the rear end is spinning or sliding out. ESC can prevent understeering and oversteering by briefly braking the appropriate wheel. In many cases engine power also is reduced.

## THE LAW

### Federal Motor Vehicle Safety Standards; Electronic Stability Control Systems

As part of a comprehensive plan for reducing the serious risk of rollover crashes and the risk of death and serious injury in those crashes, this rule establishes Federal Motor Vehicle Safety Standard (FMVSS) No. 126 to require electronic stability control (ESC) systems on passenger cars, multipurpose passenger vehicles, trucks, and buses with a gross vehicle weight rating of 4,536 Kg (10,000 pounds) or less. ESC systems use automatic computer-controlled braking of individual wheels to assist the driver in maintaining control in critical driving situations. NHTSA estimates ESC will reduce single-vehicle crashes of passenger cars by 34% and single vehicle crashes of sport utility vehicles (SUVs) by 59%, with a much greater reduction of rollover crashes. NHTSA estimates ESC would save 5,300 to 9,600 lives and prevent 156,000 to 238,000 injuries in all types of crashes annually once all light vehicles on the road are equipped with ESC.

### Compliance Date:

Consistent with the phase in commencing September 1, 2008, all new light vehicles must be equipped with an ESC system that meets

the requirements of the standard by September 1, 2011, with the following exceptions. Vehicle manufacturers need not meet the standard's requirements for control and display requirements for the ESC malfunction indicator telltale and "ESC Off" switch and telltale (if provided) until September 1, 2011 (i.e., at the end of the phase in), and vehicles produced by final stage manufacturers and alterers must be equipped with a compliant ESC system (including the control and display requirements) by Special pre-wheel alignment handling required:

## BULB CHECK

Before driving the vehicle inside the repair facility, always perform a "bulb check first". Enter the vehicle and close the door, turn the ignition to the "ON" position and observe the check engine light, ABS light, SRS light, and ESC light, etc... make sure they come on. If one of them does not come "ON" document and report it on the work order and notify the customer. Start the engine and wait 10 seconds, observe the trouble lights inside the cluster, record and document if one remains "ON". Forgetting the bulb check can lead to expensive customer maintenance.



## DIAGNOSTICS

On ESC equipped vehicles, if the trouble indicator light remains "ON" a scan tool will be required to pull the codes, determine the root cause of the DTC and evaluate the requirements for the repair. In addition to a scan tool, current repair information along with technical service bulletins and recalls may facilitate and expedite the repair.

## SENSOR CALIBRATION

Steering angle sensor may require calibration in some cases but generally do not require it. Some sensors are self-calibrating, others require a drive cycle to confirm the reset, some can be reset from inside the vehicle without the need of a scan tool or other devices. In addition, on some systems, other sensors have to be simultaneously calibrated along with the steering angle sensor.

## BE AWARE

ESC sensor calibration may require disconnecting the battery if the device being used cannot reset the ESC's internal memory. Be sure to understand the specific actions to be taken before disconnecting a battery on a computerized vehicle. Calibrating the sensor may only take 30 seconds or so but re-initializing all other components may take up to one hour.

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## **NEXT MEETING IS NOVEMBER 8, 2011**

The November Educational Program will be presented by Ms. Charolette Cogburn of Car Color Center and Mr. Scott Smith of PPG and will be How to Look Up the Color Variants in the Chip Charts for Water Borne Paints. THIS WILL BE A JOINT CLASS WITH ACRA AND PULASKI TECHNICAL COLLAGE. It will be a hands-on class and this will be a "Bring Your Painter to ACRA" Day.

From SCRA: Thought you might all be interested to see this CNN video story, featuring one of the members of the CAA talking about the burden of regulation on the repair business. <http://www.cnn.com/video/?/video/business/2011/09/09/wian-jobs-red-tape-factor.cnn>

## National Collision Industry Alliance Business Intelligence Report September 16, 2011

Ford Motor Company rebutted a recent Automotive Body Parts Association (ABPA) press release that said replacement front bumper isolators from two 2005-2009 Ford Mustangs differed significantly from Ford's original production components. Ford explained that the parts referenced in the ABPA press releases were used for both manufacturing and service replacement, and had been thoroughly tested to meet Ford's specifications for the Mustangs in question. Ford defended its YouTube video as being accurate including Ford's contention that its collision replacement parts are the same as those used to manufacture the vehicle.

The market for automotive RADAR will grow annually by 47 percent to 28.2 million units worth \$1.2 billion by 2018 according to a report by Strategy Analytics. Automotive RADAR vendors are reducing product costs by integrating components; using multiple beam-forming antennas with digital focusing capabilities enhancing the RADAR's resolution and Field Of View; and developing design strategies that lower power consumption including "duty cycling" and "smart partitioning". Computer security company McAfee's projects the number of automotive Internet-connected devices to climb from a billion in 2010 to 50 billion in 2020. With microchips embedded in almost all parts of an automobile, including airbags, brakes, power seats, cruise-control, anti-theft gadgets and communication devices the threat of attack and malicious manipulation increases, said McAfee, adding that having a car hacked could result in "dire risks" to personal safety.

Oklahoma Insurance Commissioner John Doak will refocus his department's anti-fraud division on fraud committed by insurers against citizens. Doak asked Deputy Commissioner Brogdon to evaluate the division and Brogdon reported that it had lost sight of its core mission

and recommended a complete overhaul. Doak said. "The Oklahoma Insurance Department's Anti-Fraud Division must focus on white-collar crime that threatens policyholders."

U.S. Energy Secretary Steven Chu announced funding initiatives in 24 states to adopt electric vehicles (EVs) in communities and prepare college students for careers designing and building advanced electric automotive technologies. "By developing the next generation of automotive engineers and preparing communities for plug-in electric vehicles, these projects will help reduce our nation's dependence on oil imports, create jobs, and help America capture the growing global market for advanced vehicles," said Secretary Chu. Projects to support community planning for electric vehicle charging infrastructure will receive \$8.5 million through DOE's Clean Cities initiative to facilitate partnerships that will develop EV deployment strategies. In addition, DOE's Graduate Automotive Technology Education (GATE) initiative will receive \$6.4 million over the course of five years to support seven Centers of Excellence at American colleges, universities, and university-affiliated research institutions. Award recipients will focus on three critical automotive technology areas: hybrid propulsion, energy storage, and lightweight materials. .

Airbags may not just be for cars anymore. Two Amazon company executives are patenting a miniaturized airbag system that will protect smart phones and other mobile devices from damage if dropped. Tiny damage avoidance system would calculate the mobile device's velocity and an on-board computer would determine the deployment of airbags. Given the cost of repair, loss of information and loss of time and data, airbags may have a new future in mobile devices.

The National Collision Industry Alliance sent an email to ACRA about development of a new computer chip for automobiles: IBM is developing the next generation of computer chip that will be similar to the functionality of the human brain by learning from experience. Unlike current chips, which act on a series of pre-programmed instructions, the 'cognitive computer' will be able to reason based on its experience and even from its environment. The new chips may find ready markets in the automotive industry particularly in areas of traffic management and crash avoidance. The sound of a car horn or squealing tires, for example, may trigger automatic warnings and adaptive maneuvers.

They also report: Alcoa is expanding its Davenport Iowa manufacturing facility to meet increasing demand for aluminum in automotive manufacturing. The plant expansion will cost Alcoa \$300 million and will put the company in a good position to meet stronger demand for aluminum as OEMs look to increase vehicle fuel efficiency and performance.

## 2011 EDUCATIONAL PROGRAMS:

January 11, 2011	cancelled due to SNOW!!
February 8, 2011	Ken Leslie on academic and practitioner interaction
March 8, 2011	Robert O'Neal of Martin Senior on Hard Parts
April 12, 2011	Legislative Update – Staff Attorney Bill Lacy, Ark. Ins. Dept.
May 10, 2011	Color Matching and Water Based Paints, Ken Hopkins, ATU-Ozark
June 2011	I-CAR Class
July 2011	Cancelled
August 2011	'Dents for Dollars' - Business Consultant Mary Jane Sawyer
September 13, 2011	'Sex in the Body Shop' – Associate Dean/Law Professor Terri Beiner
October 11, 2011	Drive-by-Wire Alignment Issues – Don Coombes, Snap-On
November 8, 2011	Color Variants in Water Borne Paint – Charlotte PPG/Car Color Center
December 2011	there will be no meeting.

ACRA meets the second Tuesday of each month [EXCEPT DECEMBER] at 6:00 PM at the new Pulaski Technical College campus, 13,000 Interstate 30, Little Rock, Arkansas. The meeting is an open meeting with meal served at 6:00 PM and Educational Program immediately following. If there is a program or topic that you would like presented as an ACRA Educational Program please contact Jay Scott at (501) 351-0171.

## ACRA Sponsors:

**ALLDATA**  CollisionConnect<sup>SM</sup>



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## 2012 ACRA MEMBERSHIP DUES

2012 ACRA Membership Fee can be paid now. Please support your Collision Repair Association by mailing you Membership Fee of \$150.00 to ACRA, 109 Airway Drive, Hot Springs, AR 71913.

Name of Collision Repair Member: \_\_\_\_\_

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