



Knuckle Buster



Newsletter of the Wisconsin Association of Emergency Vehicle Technicians

November 2009

2009 Fall Seminar Wrap-up

The 2009 WAEVT Fall Seminar was held September 10 at the Fox Valley Fire Training Center. The classes were Akron Valves and Nozzles, and TFT nozzles and Appliances. Both classes were very good with very high marks for each.

Spring Seminar Plans Finalized

The annual Spring Seminar will be held May 19-20, 2010 at the Fox Valley Fire Training Center in Neenah. Classes will be Waterous Pumps, Interstate Basic Electrical, A/C and HVAC systems sponsored by Badger Truck Refrigeration and Red Dot Corporation. **The Interstate class requires a manual and pre-registration. The manuals normally sell for \$39.95, but we were able to get them for \$30 for our attendees.** We have a change of hotels for the rooms and dinner. Due to space limitations we were not able to secure the same hotel as last year. This year we will be at the Holiday Inn – Neenah Riverwalk. Rooms are \$70 single and double. Call 920-725-8441 to reserve your room. Make sure to tell them you are with the WAEVT. For maps and directions to the hotel go to www.hineenah.com.

Mike Meyer Retires From Watertown FD

After 41 years of service, Mike Meyer has announced his retirement from the Watertown Fire Department. While Mike is retiring from the fire department, he will remain active in the WAEVT and the EVT Certification Commission. He believes strongly in both and wants to stay active promoting the EVT profession.

Association Anniversary

In 2012 the Wisconsin Association of Emergency Vehicle Technicians will celebrate its 45th anniversary. The Association was started in 1967 as the Wisconsin Fire Equipment Mechanics Association to provide training to the people in Wisconsin and surrounding states. We are looking for people to help with working on a celebration of this milestone. We are also looking for former Presidents and board members. Please contact Jon Coutts with any information or to assist with organizing the event.

Safety Bulletin for Automatic Slack Adjusters



SAFETY ADVISORY

Fire Fighter Fatality Investigation and Prevention Program

Manual Adjustment of Automatic Slack Adjusters May Contribute to Unexpected Brake Failure on Automotive Fire Apparatus

NIOSH recommends that all fire departments operating fire apparatus equipped with automatic slack adjusters (ASAs) immediately take the following actions to reduce the risk of fire fighters being injured in an apparatus crash due to brake failure:

- **Ensure that ASAs are not manually adjusted.**
- **Establish procedures to ensure maintenance on fire apparatus is conducted as recommended in NFPA 1911 *Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*.**
- **Ensure maintenance is only performed by qualified technicians who meet NFPA 1071 *Standard for Emergency Vehicle Technician Professional Qualifications*.**

An automatic slack adjuster is a mechanical component of the air brake system that adjust brakes as necessary when the vehicle is in operation to compensate for wear in the brake shoes (drum brakes) or pads (disc brakes). When an ASA is found to be out of adjustment, it signifies the existence of a larger braking system problem that needs correction. Manual adjustment of ASAs should only be done by qualified technicians during installation or when absolutely necessary to move the apparatus to a repair facility (NTSB 2006, 2007; IAFC 2006).

In 2006, the International Association of Fire Chiefs (IAFC) warned the fire service of this potential problem (IAFC 2006) following an investigative report released by the National Transportation Safety Board (NTSB 2006). While conducting an investigation of a recent apparatus crash-related fire fighter fatality, NIOSH learned that fire departments may not fully appreciate the hazards related to manual adjustment of ASAs. NIOSH would like to renew efforts to bring this to the attention



Top photo. Automatic Slack Adjuster.



Photo, right. Automatic Slack Adjuster as a component of the foundation brakes.

of all U.S. fire departments, fire fighters, and fleet maintenance departments who are tasked with preventive maintenance or operation of apparatus equipped with ASAs. The manual adjustment of ASAs may contribute to unexpected brake failure on fire apparatus. When an ASA is found to be out of adjustment it signifies the existence of a larger problem with the braking system that needs to be corrected immediately. Vehicles found to have ASAs that are out of adjustment should be taken out-of-service immediately until corrective brake service is completed.

NIOSH Safety Advisory: Manual Adjustment of Automatic Slack Adjusters May Contribute to Unexpected Brake Failure on Automotive Fire Apparatus (continued)

Fire Departments should ensure that all technicians conducting brake service on fire department apparatus: (1) are certified in air brake repair to the level (T-4) required by the Automotive Service Excellence Medium/Heavy Duty Truck Technician Certification and (2) have, at a minimum, Level 1 Fire Apparatus Technician Certification as certified by the Emergency Vehicle Technician Certification Commission. Additionally, fire departments should adhere to manufacturer guidelines and recommendations and applicable federal, state or provincial, and local laws regarding apparatus inspection and maintenance [NFPA 1911].

Further, the NTSB has recommended, and NIOSH agrees, that all drivers of fire apparatus equipped with air brakes must undergo training and testing to demonstrate proficiency in the inspection and operation of air-braked vehicles. Such training should emphasize that manual adjustment of automatic slack adjusters is dangerous and should not be done, except during installation, or in an emergency situation when it is absolutely necessary to move the vehicle to a repair facility.

References

IAFC [2006]. Lessons learned from a fatal crash: Truck air brake warning: Manually adjusting automatic slack adjusters is dangerous, can lead to deadly consequences. Fairfax, VA: International Association of Fire Chiefs, **Article on Website.** Date accessed: September 2009. <http://www.iafc.org/displayindustryarticle.cfm?articlenbr=30820>.

NFPA [2006]. NFPA 1071 Standard for emergency vehicle technician professional qualifications. 2006 ed. Quincy, MA: National Fire Protection Association.

NFPA [2007]. NFPA 1911 Standard for the inspection, maintenance, testing, and retirement of in-service automotive fire apparatus. 2007 ed. Quincy, MA: National Fire Protection Association.

NTSB [2006]. Collision between a Ford dump truck and four passenger cars, Glen Rock, PA, April 11, 2003. Washington, DC: National Transportation Safety Board, NTSB Report Number HAR-06/01.

NTSB [2007]. Facts on truck brake maintenance: Dangers of manually adjusting slack adjusters. Washington, DC: National Transportation Safety Board, August.

For More Information

To receive more information about occupational safety and health topics, contact NIOSH at

Telephone: 1-800-CDC-INFO (1-800-232-4636)
TTY: 1-888-232-6348 E-mail: cdcinfo@cdc.gov
or visit the NIOSH Web site at www.cdc.gov/niosh

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The NIOSH Fire Fighter Fatality Investigation and Prevention Program is conducted by National Institute for Occupational Safety and Health. The purpose of the program is to investigate fire fighter line-of-duty deaths and formulate recommendations for preventing future deaths and injuries. The program does not seek to determine fault or place blame on fire departments or individual fire fighters but to learn from the tragic events and prevent future similar events. For more information, visit the program Web site at www.cdc.gov/niosh/fire.

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EVTA Bulletin Board

We now have our logo on the banner at the top of the site, and a password protected page for association new and business. If you haven't visited the website, it is a very valuable source of information and sharing. You do need to register to post to the site, but there is no cost. Visit the site at www.evta.info. We have several members that utilize the site.

Website News

We are continuing to update the website. We will continue to post seminar information and registration forms, will also be posting information on upcoming events and training. We are hoping to add a page with association history. If you would like to have something posted or would like to help with the website, contact Jon Coutts or John Roberts

E-Mail Addresses

We would like to utilize e-mail for sending information and newsletters to help keep costs down. If you receive the newsletter by US Mail and have an e-mail address please send it to Jon Coutts at jdcoutts@sbcglobal.net. If you know the e-mail address of another member of the association, or someone who you think would be interested in receiving our information, please forward the address to Jon at jdcoutts@sbcglobal.net.

EVT Bulletin Boards

EMERGENCY VEHICLE TECHNICIAN ASSOCIATION

www.evta.info/forums/

EMERGENCY VEHICLE LIGHTING AND WARNING SYSTEMS

www.emergencyvehicles.org

Training Opportunities

WAEVT Spring Seminar May 19-20, 2010 FVTC Fire Training Center Neenah, WI

WAEVT Fall Seminar September 16, 2010 FVTC Fire Training Center Neenah, WI

Hale Pump Schools <http://www.haleproducts.com/Main/Content,30,10.aspx>

Pierce Factory Training <http://www.piercemfg.com/company/training.cfm>

EVT Certification Commission <http://www.evtcc.org/>

Fox Valley Tech EVTCC Classes <http://www.peopleware.net/index.cfm?siteID=365&eventDisp=EVTC>

Fire Chief Magazine In Service Maintenance Section <http://firechief.com/in-service/shopcal>

One-Day Shop Projects

By Chris Cavette, Senior Editor
InService Magazine
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Sometimes it only takes a little time and effort to make a big change in shop operations. Here are some one-day projects that are easy to do and inexpensive to complete.

Clean up. Remove all the loose equipment in your shop and move it outside when the weather is good. Sweep the floors, wipe up any accumulated oil and vacuum under objects that cannot be moved. Drain the accumulated water from the shop air compressor tank — careful, there may be a lot more than you expect and it will usually have some emulsified oil in it. While you're at it, replace all burned out light bulbs or fluorescent tubes. Before you put things back, ask yourself whether you really need each item and if it can be stored somewhere else. The result can be a cleaner, brighter shop with more useable floor space.

Check fire extinguishers. Install new fire extinguishers if you don't have any, or inspect and recharge existing ones. A dry-chemical extinguisher with a UL rating of 2A10BC should be the minimum size in a shop — an extinguisher with a rating of 3A40BC and a flexible discharge hose would be better. Dry chemical extinguishing agents work well on most kinds of fires, but leave caked-on residues that can damage sensitive electronics and are difficult to remove. Halotron extinguishers are more expensive, but don't leave a residue. Mount the extinguishers in conspicuous locations at chest height using approved brackets — behind a door is not conspicuous. Place a sign above each extinguisher to identify its location.

Provide good access. It's funny how things find their way down off the shelves and into the aisles. It's dangerous too. Remove objects from aisles and doorways and find them new homes. Check that all doors can open freely. Consider installing bright floor tape or other markings to define aisles. Install appropriate exit signs above designated exit doors. Consult your local occupational safety and health agency for specific requirements — you may have to install battery-powered emergency area lights to allow safe movement in case of power failure. Also consider securing tall shelves and cabinets to the walls to prevent them from toppling over and blocking exits in case of earthquakes, tornadoes or hurricanes.

Inventory spare parts. Keeping a sufficient quantity of spare parts is only part of the job. Periodically you also need to check on what you have. Inventory does two things. First, it can help you spot errors in record keeping, or worse, theft. Second, it lets you review what you have to determine whether you still need certain items. Lots of shops clutter their shelves with spare parts for apparatus or equipment that are no longer in service. Taking inventory is a good time to rearrange items to make them more accessible. It's also a good time to make certain items less accessible if you suspect theft. Radios, batteries and expensive gear should be moved off open shelves and stored in locked areas. The recent rash of brass and copper thefts across the nation also make nozzles, fittings and adapters good candidates for secure storage. Tires should be stored away from electrical motors to prevent ozone degradation of the rubber.

Last, but most important, take some time to find the maintenance manuals for all your apparatus and equipment. Put them in one place and make sure you have the latest editions — working on a 2007 engine with a 2001 manual can cause big problems. Contact your local dealer or distributor to obtain any missing manuals. In some cases, the required maintenance manuals can be downloaded off the Internet for free. This project might take more than a day, but you can work on it in small increments until the job is done. Having the right manuals can not only help you perform maintenance with greater speed and fewer errors, but it also can help you avoid serious liability. As any lawyer will point out, if you don't have the manual, you may have trouble convincing a jury that you are doing things correctly.

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