

**TIME TIP - DOING THE MINIMUM**

Many have the attitude “I don’t get paid for that,” and they do only what is required of them to cover themselves and fail to recognize that, in order to qualify for a raise and a promotion, they have to do more now than what they are already being paid to do.

Like a wood burning stove, many stand at the cold stove and demand its heat without recognizing that you have to put the wood in first, start the flame, and wait a while for heat to radiate. They then waste their time just “doing the minimum” and not leveraging that time to generate a new, more rewarding position.

Don’t just do the minimum. Do the maximum, more than you are paid for. You will get your paycheck either way, but by doing the maximum you will get a lot more for the same time investment.

Re-printed by permission of Dr. Don Wetmore

Arkansas State Highway and Transportation Department  
Planning and Research Division  
Technology Transfer Program  
P.O. Box 2261  
Little Rock, AR 72203-2261

**Mailing Label**  
**2” X 4”**

**T<sup>2</sup> ADVISORY COMMITTEE**

**Danny Moore**  
Program Manager, Technology Transfer Center  
Phone (501) 569-2380 Fax (501) 569-2070  
In State 1-800-344-1285  
E-mail: [danny.moore@arkansashighways.com](mailto:danny.moore@arkansashighways.com)

**Gary DalPorto, P.E.**  
Federal Highway Administration

**Norman Dennis, Ph.D., P.E.**  
University of Arkansas, Fayetteville

**David Morris**  
Association of Arkansas Counties

**Ken Wasson**  
Arkansas Municipal League

**The Honorable Glenn “Sonny” Cox**  
President, County Judges Association

**Ronny Loe, P.E.**  
Assistant Director of Public Works – Little Rock

**David Mayo, P.E.**  
AHTD, State Aid Engineer

**Ed Hoppe, P.E.**  
AHTD, Engineer of Programs and Contracts



CALHOUN COUNTY COURTHOUSE  
HAMPTON, ARKANSAS



**Technology Transfer Newsletter**

Volume 21, Issue 2  
2nd Quarter

**SAFETY**

**VITAL CONCERN WHEN DRIVING FORKLIFTS**

As with every piece of equipment used, safety is a vital concern when driving powered industrial trucks (forklifts) in the workplace. In some cases, certification training is required before an employee can operate a forklift. Employees must successfully complete both a written test and a hands-on test to receive certification.

Forklift training has become mandatory in some business fields because accidents on forklifts cause approximately 100 deaths and over 36,000 serious injuries each year. Estimates show that 20-25% of these accidents are, at least in part, caused by inadequate training.



In Arkansas, the Occupational Safety and Health Administration (OSHA) requires industry personnel to receive certification training when forklift drivers are hired or assigned to drive. A re-evaluation is also required every three years. State and local government agencies are currently exempt from the certification requirement. However, operation, preventative maintenance and safety training that meets the OSHA standards is available through the Technology Transfer (T<sup>2</sup>) Program. It is the same standardized course material that is presented to industry workers throughout the State.

*(Continued on pages 2 & 5)*

(continued from page 1)

**Truck Classifications**

The first, and most important, fact that a worker should determine before operating a forklift is what type of equipment is being used. Forklifts have seven classifications. Each classification has different characteristics, uses different power and fuel sources, requires different handling methods, and features unique hazards.

<b>Class 1</b> Electric motor, sit-down driver	<b>Class 5</b> Internal combustion, pneumatic tires
<b>Class 2</b> Electric motor, narrow aisle	<b>Class 6</b> Electric motor or internal combustion, tractors
<b>Class 3</b> Electric motor, hand/walk behind driver	<b>Class 7</b> Rough terrain, pneumatic tires
<b>Class 4</b> Internal combustion, solid tires	

**Operational Classifications**

OSHA also classifies forklifts by toxic fume and explosion hazards. Forklifts should never be operated under the following conditions:

- In explosive atmospheres, unless the forklift is approved for that purpose (explosion proof).
- Where ventilation is limited, unless the forklift is approved for that purpose (gives off an acceptable level of fumes/vapors).

When a chemical spill (such as fuel or paint) occurs while operating a forklift, the operator must immediately shut off the vehicle.

**Power Sources**

Forklifts are powered by two sources:

- Fluid - LP gas, gasoline, diesel, and other fuels.
- Electrical - Batteries.

Hazards between the two power sources may be different, but they are equally serious. On-the-job training is required before refueling or recharging. The appropriate personal protective equipment must be worn when working with any power unit or power source.

**Safety Rules**

When operating a forklift, the following are some of the general safety rules for operators:

- Keep hands and feet inside of the cab area of the forklift at all times.
- Know the parts of the forklift being operated especially the pinch points and rotating parts.
- Don't wear clothing or jewelry that could get caught in moving parts. Keep long hair styles tied back or otherwise safe.
- Do not carry passengers unless the forklift is specifically designed for them.
- Never let anyone walk under a forklift load.
- Stay off of any surface that can't support the forklift and its load.
- Honk, slow down, or stop to avoid pedestrians.
- Use the horn when necessary to alert others in the area.
- Never make any modifications to a forklift without the manufacturer's prior written approval.
- Handle only stable or safely arranged loads.
- Never raise or lower the load when moving.

(continued from page 2)

When getting on or off of a forklift, drivers should follow these safety rules:

- Never get on or off of a moving forklift.
- Always use the three-point rule (arms and feet are in contact with three forklift points at all times).
- Use the hand-holds and steps on the forklift, not the levers.
- Ensure that hands and shoes are clean enough to prevent slipping.

**Pre-Shift Inspections**

Forklifts should be inspected and written reports completed at least once per day or shift, before being placed in service. If a forklift is found to be unsafe, it should be removed from use.

All defects must be corrected prior to use. Workers must never try to repair any part of a forklift, including wheels and tires, unless they are qualified, certified, and authorized to make those repairs.

All provided safety devices on the forklift must also be inspected and used.

**Common Causes of Accidents**

The following items are some of the common causes of accidents when operating forklifts:

- Misjudging the vehicle or the load, such as the brakes, load size, fork or attachment length, and other factors.
- Driving too fast (forklifts should be operated only as fast as can be done safely).
- Being overconfident.
- Misunderstanding weight and possible damage.
- Getting in a hurry to finish a job.
- Operating a forklift under the influence of alcohol, drugs, medication, or fatigue.
- Not wearing the required personal protective equipment.
- Engaging in horseplay or stunt driving.

**Tip-Overs**

Forklift drivers should understand the stability factor of a forklift. In a car, for example, the center of gravity (the place where the force of movement is centered) is constant. On a forklift, the center of gravity varies with the load.

A forklift has a stability triangle, similar to a tricycle. The faster and sharper a forklift is turned, the more weight transfer occurs.

If the combined center of gravity goes outside of the stability triangle, the forklift will tip over.

If a tip-over occurs, operators should be familiar with the equipment manufacturer's instructions for tip-overs. The following actions should normally be performed for a tip-over:

- If a sit-down forklift starts to tip, don't jump off. Brace into the seat. Be sure to wear the seat belt at all times.
- On stand-up type forklifts, step off in the direction of the fall.

The best guarantee of safety is to drive carefully and avoid tip-overs.

## BRIDGE MAINTENANCE AND INSPECTION SEMINAR

The Technology Transfer (T<sup>2</sup>) Center has recently conducted four Short Span Bridge Maintenance and Inspection training seminars around the State during the current training cycle. This seminar was held in the cities of Jonesboro, Harrison, Little Rock and Magnolia, with good attendance at each presentation.

Recent telephone calls to the T<sup>2</sup> Center have prompted us to schedule one additional training seminar for the western part of the State. Therefore, a seminar has been scheduled for the Fort Smith area and will be conducted on July 26, 2005. The selected training site will be the River Park Events Center, 121 Clayton Expressway (State Highway 255) in Fort Smith. Training time is from 8:30 a.m. to 2:30 p.m. **Contact the T<sup>2</sup> office as soon as possible to register for class attendance. Contact toll free @ 1-800-344-1285.**

## WORK ZONE SAFETY TRAINING COURSE MODIFIED

The “Work Zone Traffic Safety and Flagging” training course, sponsored by the Technology Transfer (T<sup>2</sup>) Program, is undergoing some minor modifications. The course has previously been conducted around the State as a four-hour training course. However, recent observations of actual work zone activities being conducted along our streets and roadways indicate that additional emphasis on the national standards and basic components of a work zone is needed. Therefore, additional instructional material has been added to the course to enhance the participant’s knowledge and understanding of the necessary components, layout and signing requirements that are essential to create a safe work zone for the motorists and a safe working environment for the workers.

One addition that will be noticed in the recently revised training presentation is an exercise that enables each participant, or group of participants, to complete a “Work Zone Traffic Safety Signing List” form. This simple exercise allows each participant to familiarize themselves with the important tables, charts and distance formulas shown in Part VI (Temporary Traffic Control) of the Manual on Uniform Traffic Control Devices (MUTCD). It will also help each participant to grasp a working understanding of the steps required to determine the advance placement of signs, cones and barricades within the parameters of the work zone. Step-by-step instructions will be provided to walk the workers through the form completion process. The additional presentation time will provide a better understanding of the most commonly used “Typical Applications” depicted in the MUTCD, as they apply to the work commonly performed by the local agencies.



The new presentation will be approximately seven hours in length and can be scheduled by contacting the Technology Transfer (T<sup>2</sup>) office in Little Rock at 1-800-344-1285. A minimum class attendance of approximately 15 participants is required. Combined agency sessions, with participation from surrounding city and county employees, are encouraged.

## *DON'T FORGET THE VALUE OF TRAINING* *YOUR WORKFORCE*

Contact the T2 office to arrange your upgrade training seminars and Workshops in any of the following subject areas:

- Computer Application Training (Word, Excel, PowerPoint, Access, etc.)
- Traffic Signal Maintenance Seminar (Basic and Advanced)
- Trenching and Shoring (Competent Person Certification)
- Heavy Equipment Operator Training and Safety Classes
- Management Development and Supervisory Training
- Drug and Alcohol Recognition for Supervisors
- Asphalt Pavement and Maintenance Seminar
- Work Zone Traffic Safety and Flagging
- Introduction to GPS and GIS
- Soils and Grades Workshop
- Defensive Driving Training
- Gravel Road Maintenance
- Pipe Culvert Installation
- Confined Space Entry
- First Aid/CPR

Point of Contact

**Danny Moore, Technology Transfer (T<sup>2</sup>) Program Manager**

P.O. Box 2261, Little Rock, Arkansas 72203 \* 1 (800) 344-1285 \* (501) 569-2380 \* FAX (501) 569-2070 \* Mobile (501) 749-9178