



Effective Safety and Health Training

**Student Materials
Level Two MTI Course
Consultation Education and Training Division
Michigan Occupational Safety and Health Administration
Michigan Department of Labor and Economic Opportunity
www.michigan.gov/miosha
517-284-7720**



(Revised 08/22)



Effective Safety and Health Training

MIOSHA Training Institute Level Two Course

Presented By:

Consultation Education and Training (CET) Division
Michigan Occupational Safety and Health Administration (MIOSHA)



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Objectives

Discuss the value of health and safety training.

Determine who and what needs to be trained.

Discuss how to design effective training.

Identify ways to make sure training is effective.

Enhancing and adding flexibility in your training programs.



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Class Introductions / Activity

- Your name and company?
- Reason for taking this course and associated expectations?
- What is your role in Safety and Health Training?
- Write two truths and one lie about yourself on a piece of paper.



Read aloud and the class will try to guess which of the three is the lie :)

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What Constitutes “*Effective*” Training?

The definition of “effective”

- adequate to accomplish a purpose;
producing the intended or expected result
- producing a deep or vivid impression

Source: Dictionary.com

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Jennifer Riordan

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Key Elements of Effective Training

- Remove training barriers enabling participation
- Ensure trainers are competent (able to deliver content)
- Provide site/job/task/skill specific training
- Utilize appropriate instructional methods
- Ensure content covers what is required by regulations

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Illustrate points using stories

- Creates relevance to students
- Principles and skills in real word setting



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Key Elements of Effective Training (cont.)

- Provide an opportunity for employees to ask questions
- Assess competencies – test!
 - Do employees recognize, understand, and avoid hazards?
 - Do employees use any and all safeguards in place?
 - Observe them
 - Are they performing as trained?
- Periodically evaluate and verify the effectiveness



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When is Refresher Training Required?

-
- If it is required by MIOSHA regulations
 - Observed non-compliance
 - New hazards/procedures introduced to the workplace
 - Return to work environment
 - Extended leave, remote work
 - Non-routine tasks
 - Infrequently encountered hazards can merit refresher training



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Safety and Health Management Systems (SHMSs)

What seven elements does an effective SHMS include?

1. Management Leadership
2. Worker Participation
3. Hazard Identification and Assessment
4. Hazard Prevention and Control
5. Education and Training
6. Program Evaluation and Improvement
7. Communication and Coordination for Host Employers, Contractors and Staffing Agencies

INTRODUCTION CORE ELEMENTS OF THE SAFETY AND HEALTH PROGRAM RECOMMENDED PRACTICES

MANAGEMENT LEADERSHIP	<ul style="list-style-type: none"> • Top management demonstrates its commitment to continuous improvement in safety and health, communicates that commitment to workers, and sets program expectations and responsibilities. • Managers at all levels make safety and health a core organizational value, establish safety and health goals and objectives, provide adequate resources and support for the program, and set a good example.
WORKER PARTICIPATION	<ul style="list-style-type: none"> • Workers and their representatives are involved in all aspects of the program—including setting goals, identifying and reporting hazards, investigating incidents, and tracking progress. • All workers, including contractors and temporary workers, understand their roles and responsibilities under the program and what they need to do to effectively carry them out. • Workers are encouraged and have means to communicate openly with management and to report safety and health concerns without fear of retaliation. • Any potential barriers or obstacles to worker participation in the program (for example, language, lack of information, or disincentives) are removed or addressed.
HAZARD IDENTIFICATION & ASSESSMENT	<ul style="list-style-type: none"> • Procedures are put in place to continually identify workplace hazards and evaluate risks. • Safety and health hazards from routine, nonroutine, and emergency situations are identified and assessed. • An initial assessment of existing hazards, exposures, and control measures is followed by periodic inspections and assessments, to identify new hazards. • Any incidents are investigated with the goal of identifying the root causes. • Identified hazards are prioritized for control.
HAZARD PREVENTION & CONTROL	<ul style="list-style-type: none"> • Employers and workers conspire to identify and select methods for eliminating, preventing, or controlling workplace hazards. • Controls are selected according to a hierarchy that uses engineering solutions first, followed by safe work practices, administrative controls, and finally personal protective equipment (PPE). • A plan is developed to ensure that controls are implemented, interim protection is provided, progress is tracked, and the effectiveness of controls is verified.
EDUCATION & TRAINING	<ul style="list-style-type: none"> • All workers are trained to understand how the program works and how to carry out the responsibilities assigned to them under the program. • Employers, managers, and supervisors receive training on safety concepts and their responsibility for protecting workers' rights and responding to workers' reports and concerns. • All workers are trained to recognize workplace hazards and to understand the control measures that have been implemented.
PROGRAM EVALUATION & IMPROVEMENT	<ul style="list-style-type: none"> • Control measures are periodically evaluated for effectiveness. • Processes are established to monitor program performance, verify program implementation, and identify program shortcomings and opportunities for improvement. • Necessary actions are taken to improve the program and overall safety and health performance.
COMMUNICATION AND COORDINATION FOR HOST EMPLOYERS, CONTRACTORS, AND STAFFING AGENCIES	<ul style="list-style-type: none"> • Host employers, contractors, and staffing agencies commit to providing the same level of safety and health protection to all employees. • Host employers, contractors, and staffing agencies communicate the hazards present at the worksite and the hazards that work of contract workers may create on site. • Host employers establish specifications and qualifications for contractors and staffing agencies. • Before beginning work, host employers, contractors, and staffing agencies coordinate on work planning and scheduling to identify and resolve any conflicts that could affect safety or health.

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Who Trains Temporary Employees?

- **Both** host employers and staffing agencies have roles in complying with workplace health and safety requirements and they **share** responsibility for ensuring worker safety and health.
- A key concept is that each employer should consider the hazards it is in a **position to prevent and correct**, and in a position to **comply** with MIOSHA standards. For example: staffing agencies might provide general safety and health training, and host employers provide specific training tailored to the particular workplace equipment/hazards.

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Who Trains Temporary Employees?



The key is **communication** between the agency and the host to ensure that the necessary protections are provided.



Staffing agencies have a duty to inquire into the conditions of their workers' assigned workplaces. They must ensure that they are sending workers to a safe workplace.

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Who Trains Temporary Employees?



Staffing agencies need not become experts on specific workplace hazards, but they should determine what conditions and hazards exist at their client (host) agencies, and how best to ensure protection for the temporary workers.



The staffing agency has the duty to inquire and **verify** that the host has fulfilled its responsibilities for a safe workplace.

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Benefits of Implementing a Safety and Health Management System

- Lowered workers' compensation costs
- Reduced personnel turnover
- Reduced lost workdays
- Compliance with standards and regulations
- Reduction or elimination of property damage due to incidents
- Reduced impact on the environment due to incidents
- Increased productivity
- Improved employee health status
- Improved product quality
- Higher employee morale

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Module 2 Determining the Need for Training

- *Is training the solution?*
- *When do we need training?*
- *Who needs training?*

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Determining the Need for Training



Act 154: The MIOsha Act



Provide

PPE, guards, safe equipment, programs, start-up procedures, etc.



Train

Hazards, Steps/Procedures, Safeguards



Supervise

Observe that job is done safely
Supervisors represent employer



Ensure

Accountability for all employees



If you haven't provided, supervised and/or ensured....training is NOT the issue.

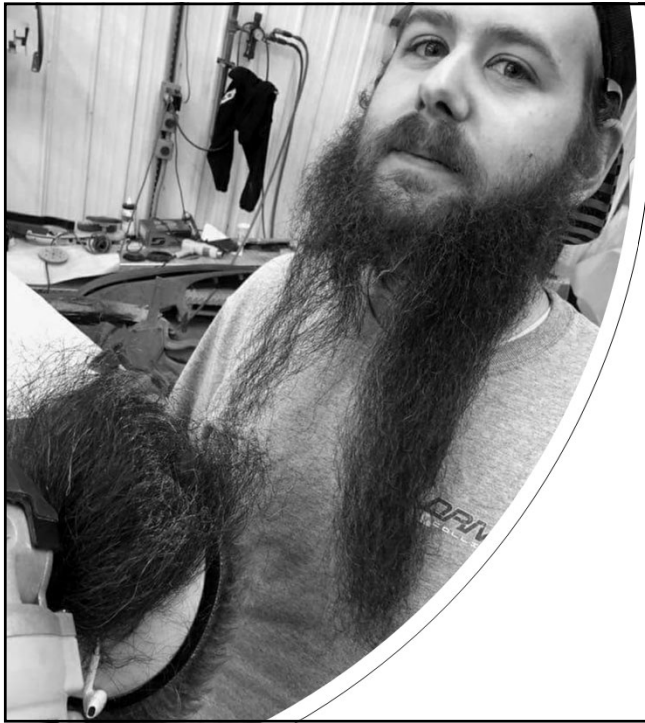
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Can Training Ever be Enough?

- **General training**
Orientations, videos, PowerPoints, pamphlets, books
- **Job-specific training**
Must address specific steps, hazards, and safeguards



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Who Needs Training

- Managers / Supervisors
- Operators
- Engineers
- Maintenance
- Office staff
- Contractors
- Guest
- Temporary Workers

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How Do Training Needs Arise?

- | | |
|---|--|
| <ul style="list-style-type: none"> • New hires • Promotions • Job transfers • New work procedures • New workplace hazards (i.e., Pandemics) • New workplace equipment | <ul style="list-style-type: none"> • New working relationships between workers and managers • Increased or revised workload • Change in ownership • When a knowledge gap exists • MIOSHA standards and other regulatory requirements |
|---|--|

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Determining the Need for Training

Before we get started, we need to know:

- Does this standard and training requirement apply to my organization?
- Who is required to be trained?
- What should the training include?
- When is the training required?
- Who will provide the training?



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Group Activity

Complete a Sample Matrix

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Sample - Training Matrix Form

ABC Inc. Required Employee Training Matrix						
Standard Number	Sample Training Topics	Frequency	Supervisors	Maintenance	Shipping	Equipment Operator
1	General Provisions					
11*	Fixed and Portable Ladders					
6	Fire Exits					
13*	Mobile Equipment					
18	Overhead and Gantry Cranes (includes					
19	Crane, Locomotive & Truck Cranes (includes testing)					
20	Underhung Cranes and Monorail Systems					
21	Powered Industrial Trucks					
23	Hydraulic Presses					

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It's easy to assume people know how things work.



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Interpreting a MIOSHA Standard - Example: Part 451. Respiratory Protection

PART 451. RESPIRATORY PROTECTION

Table of Contents:

R 325.60051 Scope and application.....	1	1910.134(l) Program evaluation.....	12
R 325.60052 Adoption by reference of federal standard.....	1	1910.134(m) Recordkeeping.....	12
		1910.134(n) Effective date.....	12
		1910.134(o) Appendices.....	12
1910.134 Respiratory Protection	2		
1910.134(a) Permissible practice.....	2	1910.134 Appendix A Fit Testing Procedures (Mandatory).....	13
1910.134(b) Definitions.....	2	Appendix B-1 User Seal Check Procedures (Mandatory).....	23
1910.134(c) Respiratory protection program.....	4	Appendix B-2 Respirator Cleaning Procedures (Mandatory).....	24
1910.134(d) Selection of respirators.....	4	Appendix C OSHA Respirator Medical Evaluation Questionnaire (Mandatory).....	25
1910.134(e) Medical evaluation.....	6	Appendix D Information for Employees Using Respirators When Not Required Under the Standard (Mandatory).....	30
1910.134(f) Fit testing.....	7		
1910.134(g) Use of respirators.....	8		
1910.134(h) Maintenance and care of respirators.....	9		
1910.134(i) Breathing air quality and use.....	10		
1910.134(j) Identification of filters, cartridges, and canisters.....	11		
1910.134(k) Training and information.....	11		

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Interpreting a MIOSHA Standard - Example: Part 6. Fire Exits

PART 6. FIRE EXITS

Table of Contents:

GENERAL PROVISIONS.....	2	MEANS OF EGRESS.....	6
R 408.10601 Scope.....	2	R 408.10631 Construction, maintenance and changes.....	6
R 408.10602 Applicability.....	2	R 408.10632 Obstructions.....	6
R 408.10603 Definitions; B to F.....	2	R 408.10633 Permissible exits and exit components.....	7
R 408.10604 Definitions; H to M.....	2	R 408.10634 Number of exits.....	7
R 408.10605 Definitions; N to S.....	3	R 408.10635 Travel distance to exits.....	7
R 408.10606 Adoption of standards by reference; access to other MIOSHA rules.....	3	R 408.10636 Maximum travel distance to exits.....	8
R 408.10608 Notification of emergency escape procedures and routes; designation of evacuation assistants.....	4	R 408.10639 Capacity as affected by population.....	8
R 408.10611 Design of buildings and structures.....	4	R 408.10641 Exit access and discharge.....	9
R 408.10612 Occupancy of new buildings.....	4	DOORS AND STAIRS.....	10
R 408.10613 Occupancy and use during repairs and alterations.....	4	R 408.10643 Doors, general provisions.....	10
R 408.10614 Operating condition of protective equipment.....	4	R 408.10644 Door swing.....	10
CLASSES OF OCCUPANCY AND HAZARD OF CONTENTS.....	5	R 408.10645 Locks, fastening devices, and closing mechanisms.....	10
R 408.10621 Classes of occupancy.....	5	R 408.10646 Power operated doors.....	10
R 408.10622 Multiple and partial occupancies.....	5	R 408.10647 Revolving doors.....	10
R 408.10623 Employee emergency plans.....	5	R 408.10651 Stairs.....	10
R 408.10624 Fire prevention plans.....	6	HORIZONTAL EXITS, RAMPS AND ESCALATORS.....	11
R 408.10627 Compliance with alternate exit-route codes.....	6	R 408.10661 Horizontal exits.....	11
		R 408.10664 Ramps.....	11
		R 408.10667 Escalators.....	12
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		R 408.10671 Fire escape stairs.....	12
		R 408.10672 Stair construction and load.....	12
		R 408.10673 Exposure to fire escape stairs.....	12
		R 408.10674 Access to fire escape stairs.....	12
		R 408.10675. Swinging stairs.....	13

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Part 6. Fire Exits

Does this standard and associated training requirement apply to my organization?

R 408.10601. Scope.

Rule 601. This part specifies requirements for means of egress for employee use required by the advent of hazardous conditions such as fire, explosion, and natural disaster.

Who is required to be trained?

R 408.10602. Applicability

Rule 602. (1) This part covers new and existing construction.....

(2) Iffire safety standards conflict with this part, the more restrictive.....shall apply.



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Part 6. Fire Exits

What should the training include?

R 408.10608. Notification of emergency escape procedures and routes; designation of evacuation assistants.

Rule 608. (1) An employer **shall** assure that employees are **informed** of emergency escape procedures and emergency routes to approved means of egress.

(2) An employer **shall** designate a sufficient number of persons to assist in the safe and orderly emergency evacuation of employees.

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Part 6. Fire Exits

What should the training include? (continued)

R 408.10623. Employee emergency plans

Rule 623. (1) This rule applies to all emergency action plans *that are required* by a particular MIOSHA standard.....

Meaning.....if not required by another MIOSHA standard, Rule 623 doesn't apply here.

If an emergency plan is required by another standard..... I would read on in this Rule where it says when the plan has to be in writing and what the plan shall contain at a minimum.

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Part 6. Fire Exits

What should the training include? (continued)

R 408.10624. Fire Prevention Plans

Rule 624. (1) This rule applies to all fire prevention plans that are required by a particular Michigan occupational safety and health act standard.

Similar to the previous rule.....*if required by another standard* then it must meet some minimum requirement listed in (2) and

(4) An employer *shall inform* employees of the fire hazards of the materials and processes to which they are exposed.

(5) An employer *shall review*, with each employee, upon initial assignment, those parts of the fire prevention plan that.....

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Part 6. Fire Exits

When is the training required?

If it says shall inform, train, review.....with no frequency one would assume it is initial training.

Rule 624 (5). States an employer shall review, with each employee, upon initial assignment.....(implying before being exposed to existing or newly introduced hazards).

However, keep in mind training needs to be effective.

How much does someone remember about training they received ten years ago? Does some refresher training make sense?

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Who will provide the training?

Technical Training

- Someone well versed in the topic and/or equipment
- Subject matter expert - "qualified" and "competent person"
- Site Safety person - depends on above
- Outside consultant

Leadership

- Nice to have them kick off a training to show support and reiterate the importance/purpose of the safety and health training
- Important in building a workplace safety and health culture

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Group Activity

Interpreting Standards

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Group Activity

Based on your given standard - answer the following questions:

- Does this standard and training requirement apply to my organization?
- Who is required to be trained?
- What should the training include?
- When is the training required?
- Who will provide the training?

Record your answers and have a group spokesperson report out the group findings.

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Parts 42/92/430. Hazard Communication

§1910.1200 HAZARD COMMUNICATION	12
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(b) Scope and application	12
(c) Definitions	12
(d) Hazard classification	16
(e) Written hazard communication program	19
(f) Labels and other forms of warning	20
(g) Safety data sheets	20
(h) Employee information and training	21
(i) Trade secrets	21
(j) Effective dates	21
§1910.1201 Retention of Dot Markings, Placards, and Labels. (General Industry)	2
§1926.61 Retention of Dot Markings, Placards, and Labels. (Construction)	2
§1928.21 Applicability of Standards in 29 CFR Part 1910. (Agriculture)	2
Appendix A--Health Hazard Definitions (Mandatory)	2
A.0 General classification considerations	2

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Part 33. GI Safety Standard – Personal Protective Equipment

PART 33. PERSONAL PROTECTIVE EQUIPMENT	
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R 408.13301 Scope	2
R 408.13301a Adopted and referenced standards	2
R 408.13302 Definitions: A to E	3
R 408.13303 Definitions: F, G	3
R 408.13304 Definitions: H, I	4
R 408.13305 Definitions: L to R	4
R 408.13306 Definitions: S to W	4
R 408.13308 Personal protective hazard assessment and equipment selection	5
R 408.13309 Personal protective equipment training	6
R 408.13310 Employer's and employee's responsibilities	6
PAYMENT FOR PERSONAL PROTECTIVE EQUIPMENT	6
R 408.13310a Payment for personal protective equipment (PPE)	6
EYE AND FACE PROTECTION	7
R 408.13311 Eye and face protection; consensus standards	7
R 408.13312 Use of eye and face protection	7
R 408.13312a Filter lenses	8
R 408.13313 Maintenance and cleanliness of protectors	9
WELDING HELMETS AND HAND SHIELDS	9
R 408.13320 Purposes, types, styles, and marking	9
R 408.13321 Rigid helmet bodies	9
R 408.13322 Rigid helmet headgear or cradles	9
R 408.13323 Rigid helmet headgear substitutes	9
R 408.13324 Rigid helmet filter plates	9
R 408.13325 Nonrigid helmets	10
R 408.13327 Hand shield	10
R 408.13329 Helmet and hand shield lift fronts and chin rests	10
R 408.13330 Helmet snoods, neck protectors, and aprons	10
R 408.13332 Effect of head protection standards	10
FACE SHIELDS	10
R 408.13340 Purposes and uses	10
R 408.13342 Types and materials	10
R 408.13343 Components	10
R 408.13344 Windows	11
R 408.13345 Headgear	11
R 408.13346 Crown and chin protectors	11
R 408.13347 Marking; special operating conditions	11
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R 408.13350 Prescription lenses	11
R 408.13352 Materials	11
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R 408.13355 Eyecup goggles; components	12
R 408.13356 Eyecup goggles; types and models	12
R 408.13357 Eyecup goggles; fit	12
R 408.13359 Eyecup ventilation	12
R 408.13360 Eyecup lenses and retaining rings	12
R 408.13362 Flexible and cushioned fitting goggles; construction	12
R 408.13363 Flexible and cushioned fitting goggles; protection	13

Does this PPE standard address hearing protection?

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Parts 380. Occupational Noise Exposure (GI Health Standard)

GENERAL INDUSTRY SAFETY AND HEALTH STANDARD	
PART 380. OCCUPATIONAL NOISE EXPOSURE IN GENERAL INDUSTRY	
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1910.95 OCCUPATIONAL NOISE EXPOSURE.....	4
1910.95(a) Protection against the effects of noise exposure.....	4
1910.95(b)(1) When employees are subjected to sound exceeding those listed in Table G-16.....	4
1910.95(c) Hearing conservation program.....	5
1910.95(d) Monitoring.....	5
1910.95(e) Employee notification.....	6
1910.95(f) Observation of monitoring.....	6
1910.95(g) Audiometric testing program.....	7
1910.95(h) Audiometric test requirements.....	8
1910.95(i) Hearing protectors.....	8
1910.95(j) Hearing protector attenuation.....	8
1910.95(k) Training program.....	8
1910.95(l) Access to information and training materials.....	8
1910.95(m) Recordkeeping.....	9
1910.95(n) Appendices.....	9
1910.95(o) Exemptions.....	9
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Appendix B - Methods For Estimating The Adequacy Of Hearing Protector Attenuation.....	14
Appendix C - Audiometric Measuring Instruments.....	15
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Appendix E - Acoustic Calibration Of Audiometers.....	17
Appendix F - Calculations And Application Of Age Corrections To Audiograms.....	18
Appendix G - Monitoring Noise Levels Non-Mandatory Informational Appendix.....	21

Note: Part 380. ONLY applies to GI and **NOT** Construction.

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Parts 680. Noise Exposure for Construction (Construction only)

PART 680. NOISE EXPOSURE FOR CONSTRUCTION

R 325.60131 Noise exposure; conservation program.

Rule 1. (1) An employer shall ensure that protection against the effects of noise exposure is provided when the sound levels exceed those shown in Table D-2 of this rule when measured on the A-scale of a standard sound level meter at slow response. [1926.52(a)]

(2) An employer shall utilize feasible administrative or engineering controls if employees are subjected to sound levels exceeding those listed in Table D-2 of this rule. If the controls fail to reduce sound levels within the level of the

(a) If the daily noise exposure is composed of 2 or more periods of noise exposure of different levels, then an employer shall consider their combined effect rather than the individual effect of each. An employer shall compute exposure to different levels for various periods of time according to the formula set forth in subdivision (b) of this subrule. [1926.52(d)(2)(i)]

(b) $F_e = \frac{T_1 + T_2 + \dots + T_n}{L}$

Note: There are two different noise standards –
Construction requirements are NOT the same as GI

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Part 85. Control of Hazardous Energy (Lockout) (GI Safety Standard)

PART 85. THE CONTROL OF HAZARDOUS ENERGY SOURCES

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R 408.18599. Rescission.....	1	(e) Release from lockout or tagout.....	5
(a) Scope, application and purpose.....	1	(f) Additional requirements.....	5
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Part 13. Mobile Equipment (Construction Safety Standard)

PART 13. MOBILE EQUIPMENT

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(b) Specific requirements.....	2	(e) Labeling.....	9
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(a) Earthmoving equipment; general.....	3	(c) Facilities and apparatus.....	10
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(b) Pile driving from barges and floats.....	8	(a) General.....	14
(c) Pile driving equipment.....	8	(b) Applicability.....	14
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Module 3

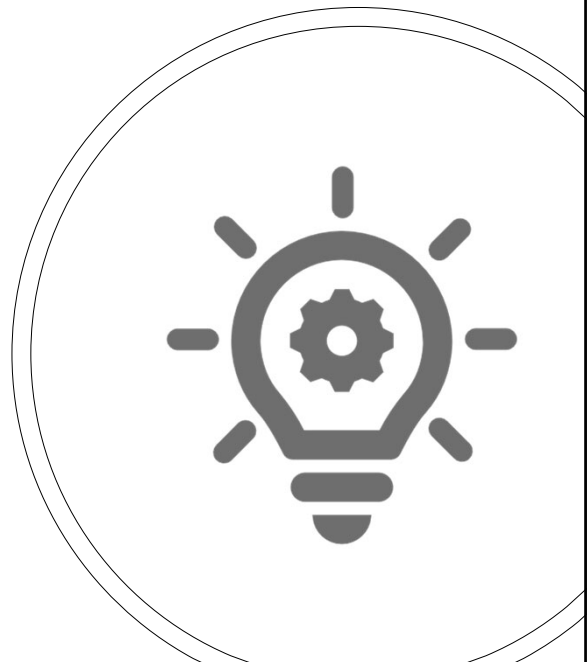
How to Design Your Training

- Characteristics of adult learners
- Flow of training
- Activities and games
- Developing objectives

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Active Learning - How Do We Get There?

While we are really good at thinking about why things are needed from our perspective, it is much more important to consider what is important to the learner.



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Group Activity

Understanding Adult Learners

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Think back to positive and negative learning experiences, whether in a training session, the classroom, or at meetings.

What made it a positive learning experience?

What made it a negative learning experience?

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Discuss the characteristics of adult learners

Learn better in an informal and **applied** environment.

Must recognize the need to learn.

Want to apply new learning back on the job.

Need to integrate past experience with new material.

Prefer the concrete to the abstract.

Need a variety of training methods.

Want to solve realistic problems.

Prefer hands-on methods of learning.

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Discuss the characteristics of adult learners


Motivation. If the participant does not recognize the need for the information (or has been offended or intimidated), all of the instructor's effort to assist the participant to learn will be in vain.

Feedback and active learning are **critical** ways to ensure that the instruction is meeting the learners' needs.



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Virtual Training (Instructor Perspective)

- Practice proper preparation
- Be in the class to greet participants
- Set expectations
- Build in participant engagement
- Ask for feedback

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Virtual Training (Student Perspective)

- Prepare for Training
- Arrive on Time
- Cameras
- Set an Out of Office reply or message
- Participate



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Develop the overall flow of their training

- **Gain Attention** - This is the first thing we must do!
- Inform Learner of Objectives
- Stimulate Prior Knowledge
- Present Material
- Guided Practice
- Elicit Performance
- Provide Feedback
- Assess Learning and Performance
- Promote Transfer and Retention

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Active Learning - How Do We Get There?

- Exercises
- Case study
- Role play
- Modeling/Demonstration
- Games
- Stories
- Discussion
- Brainstorm
- Open-ended question
- Small group/break out sessions



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Explain how activities and games are used to keep students engaged

For examples of the various types of activities, here is one example: www.thiagi.com

Games, Games, Games!

1. **Jeopardy! ®**: Perhaps the most common training game. Seems to be naturally well-suited to be adapted for training purposes. Categories are flexible. Use key points for "answers". Use it for review before a post-test. Some general tips for ease of use and play (for many training games):
 - a. Create "teams" of multiple players.
 - b. Give them (or have them choose) creative team names.
 - c. Use kids' "squeaky" toys instead of "lock out" buzzers.
 - d. Call yourself "Alex Tyvek ®" for fun.
 - e. Use Post-It's ® for your questions board. They stick to a lot.
 - f. Decide ahead if they have to say "What is...?" or not.
 - g. Give everyone a prize (not just the "winners").
2. **Family Feud ®**: Another "spirited" fun game. Obviously well suited for "teams." Again, use (large) kids pop-up (or other) toys as the buzzers. Use easel and paper, overhead transparencies, or Word, Excel, or PowerPoint for the "board."
3. **Hollywood Squares ®**: A great game that involves the whole group no matter how big it is! Just like the

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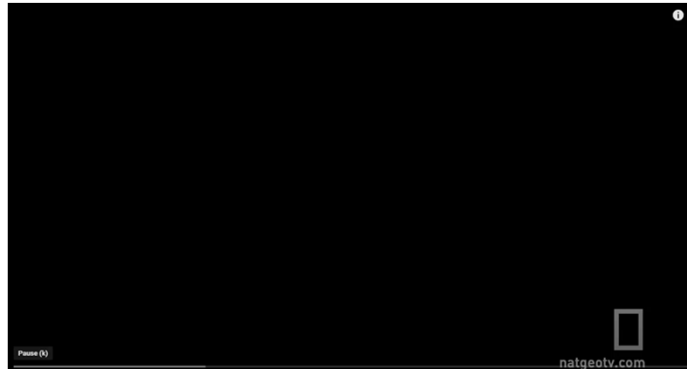
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Develop observable and measurable objectives

Let's answer these two questions:

- Why do we need to write objectives?
- How do we write objectives?



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Why do we need to write objectives?

Provides the road map to where you are going and how you are going to get there.

Tells the learner what they will be able to do at the end of the instruction.

Tells learners how their performance will be assessed.

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How to Write Strong Objectives

Top Two Requirements:

- Observable and Measurable
- Learner focused

Examples:

- The student will be able to:
 - Identify the possible health hazards related to the given construction scenarios.
 - List the top five MIOSHA safety violations found in General Industry over the past three years.
 - Describe how to use the four sources of evidence when conducting an accident investigation: people, position, parts, and paper.

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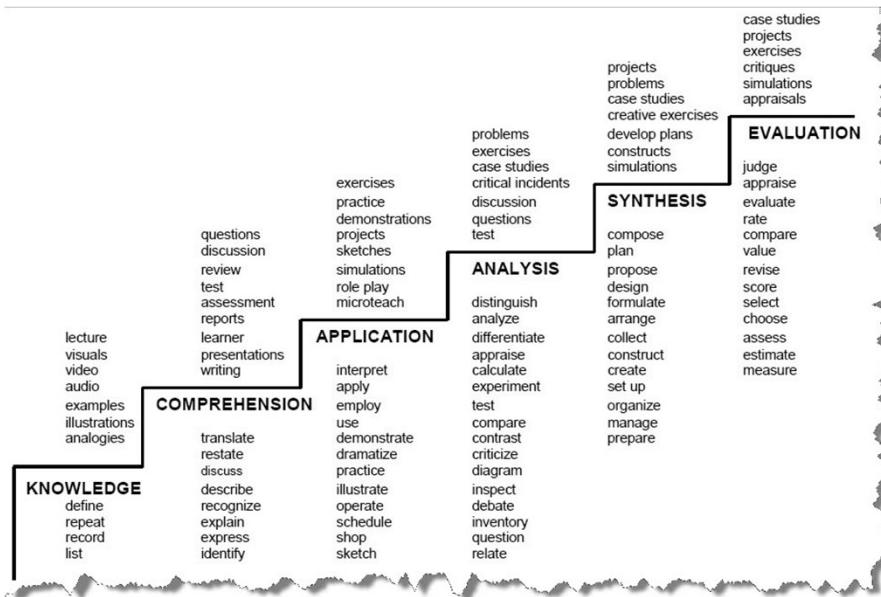
Verbs to Avoid

- | | |
|--------------------------|---------------|
| • Know | • Cover |
| • Comprehend | • Internalize |
| • Understand | • Learn |
| • Appreciate | • Realize |
| • Familiarize | • Believe |
| • Study | • Enjoy |
| • Be aware | • Discover |
| • Become acquainted with | • Think |

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Verbs to Use



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Objectives - Example

- Directly relate the objectives to the training requirements within the standard
- Referring to Part 451, objectives might be:
 - The student will be able to:
 - Demonstrate how to don and doff equipment.
 - Describe limitations of equipment

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Group Activity


Writing Objectives

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Use the Standard(s) you worked on previously

- Based on the Standards' training requirements, write one or two training objectives
- Objectives should be:
 - Learner focused
 - Observable
 - Measurable

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A 3D rendering of a training session. A trainer figure stands at the front, pointing to a blank whiteboard. Several trainee figures are seated around a large conference table, each with a laptop open in front of them. The scene is set in a modern, minimalist office environment.

Module 4 Making Sure Your Training is Effective

- Discuss characteristics of an effective trainer
- Validate the knowledge of your workforce
- Write a sample test question

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Individual Activity

- Take out a blank sheet of paper
- Record your thoughts on the given topic
- Don't analyze your thoughts – just write
- You will have one minute

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Characteristics of an Effective Trainer

- Knowledge of subject
- Good eye contact
- Practice, Practice, Practice
- Professional appearance
- Make people comfortable
- Good listener
- Motivational
- Open body language
- Good voice quality
- Enthusiastic
- Tactful
- Flexible
- Organized
- Use of different media
- Positive Attitude
- Sense of humor
- Engages attendees (stories, asks questions)
- And more....

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Effective Presentation Skills

- Gained attention and interest
- Topic introduced clearly
- Main points stated clearly and organized
- Language clear and concise
- Easy to follow
- Sufficient eye contact
- Voice used to add impact
- Nonverbal communication effective
- Good posture



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Training Environment

- Room layout
- Temperature
- Noise/distractions
- Chairs, lighting, work surfaces if needed
- Instructor position
- Etc.



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Activity Individual Presentations

- You will have two minutes to prepare a one-minute presentation based on the topic provided.
- Incorporate Effective Presentation Skills into your presentation.
- Feedback will be provided to the presenter using the evaluation form provided.

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Questions or comments about the exercise?

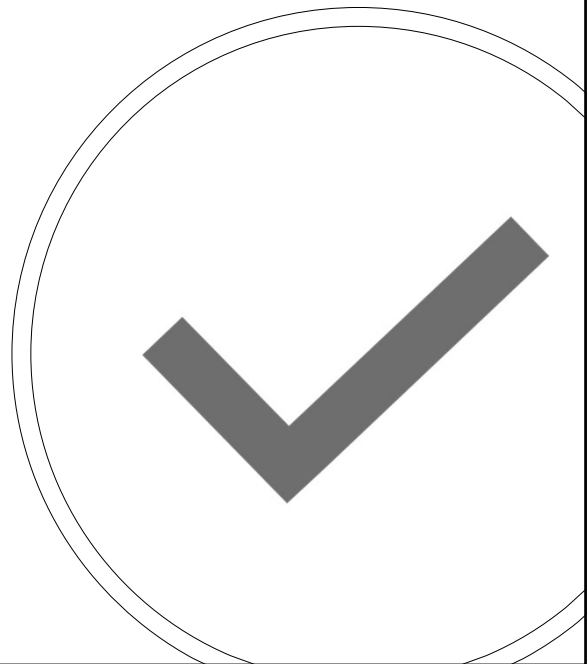


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Validation

- Test learner's knowledge of the topic
- **Improved employee performance**
- Demonstrate the job/hazard specific skills
- **Improved safety record**



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Part 21. Powered Industrial Truck Training - Validation

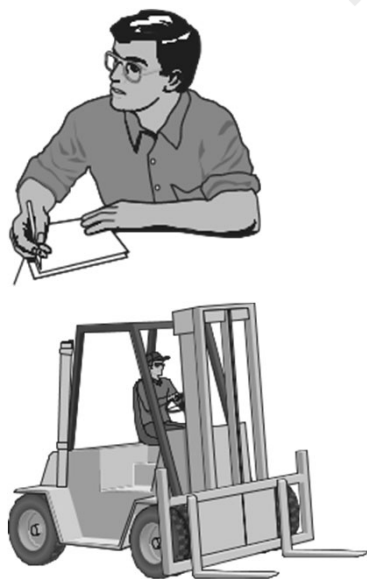
III. Testing - Rule 2153

(1) Testing

- (a) Operating ability
- (b) Knowledge of the equipment
- (c) Knowledge of employee responsibility
- (d) Daily checks

(2) Performance test

(3) Valid permit



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Verifying Knowledge and Skills

Verify knowledge through testing

Verify skills through application

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Testing

- The most common way to verify learning is to test.
- Tests should be based on objectives.
- We want to remove subjectivity out of tests.

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Overview: Testing Questions

- True/False
- Matching
- Multiple Choice
- Completion/Fill in Blank
- Short Answer
- Essay

75

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True/False

Advantages

- Can test a large amount of content
- Students can answer 3-4 questions a minute

Disadvantages

- They are easy to answer
- Students have a 50-50 chance of getting the right answer

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Matching

Advantages

- Maximum coverage at knowledge level in a minimum amount of space
- Good for basic levels of learning

Disadvantages

- Time consuming for students
- Not good for higher levels of learning

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Multiple Choice

Advantages

- Can cover broad range of content
- Minimal writing for students
- Versatile at all levels

Disadvantages

- Difficult to write good test items
- Difficult to come up with alternative responses

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Multiple Choice

- Write clear stem question
- Avoid “always,” “never,” and “all of the above”
- Vary the position of the answer
- Do not make the answer stand out as a result of phrasing

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Essay

Advantages

- Students can respond in their own way
- Easy to build or write
- Requires higher level of application

Disadvantages

- Requires well written instructions
- Time consuming to write responses

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Essay

- Make questions focused so answers do not ramble
- Create grading criteria
- Outline a model answer
- Grade “blind”

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Completion/ Fill in the Blank/ Short Answer

Advantages

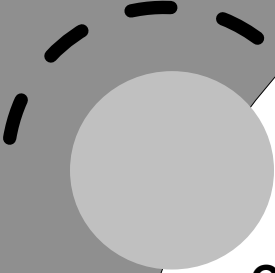
- Easy to present
- Easy to test recall
- Scoring can be easy and objective since specific answers are expected

Disadvantages

- Only good for simple recall
- Can be confusing and subjective

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Completion/Fill in the Blank/Short Answer

- Be sure there is only one correct answer - otherwise be flexible
- Consider spelling errors

83

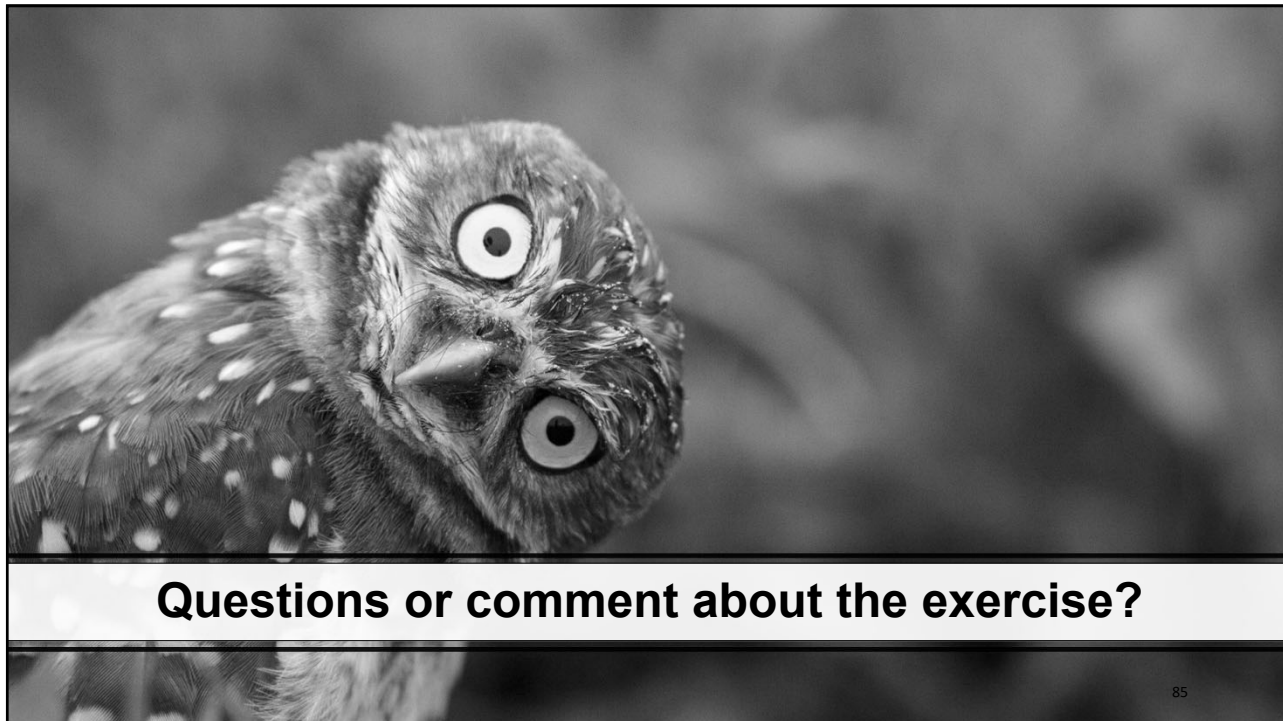
83

Individual Activity

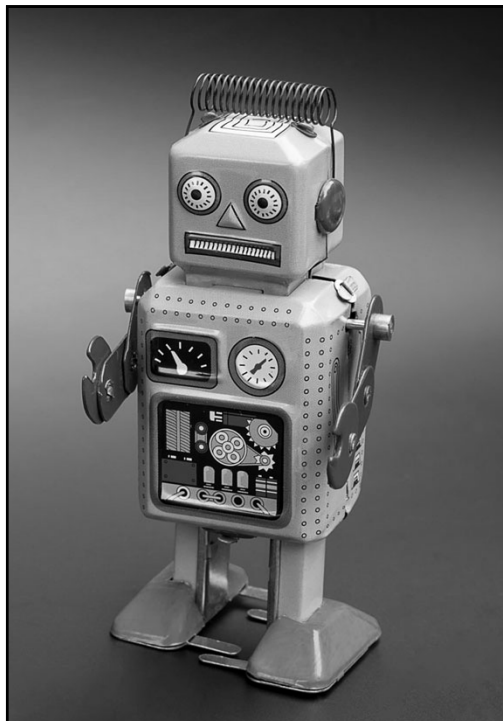
Writing Test Questions

Write two test questions using what we have learned today on the standard you were given earlier.

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Module 5

Enhancing and adding flexibility in your training programs

- Tools, resources, and ideas to make your training interesting, engaging, and effective.

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NIOSH **FACE**
 Fatality Assessment and Control Evaluation Program
 Division of Safety Research • 1095 Willowdale Road • Morgantown, West Virginia 26505 • Phone (304)285-5916
 FACE Report Number 2014-01 July 22, 2016

Maintenance Worker Struck by Forklift Carriage—Tennessee

SUMMARY

On February 28, 2014, a 51-year-old maintenance worker was crushed by the forks of a forklift he was repairing. At the time of the incident, the maintenance worker was working below the elevated forks, replacing a hydraulic seal on the forklift carriage lift mechanism while the carriage and forks were supported by resting the fork tips on the edge of a shipping container. The forklift operator was standing next to the forklift. As the maintenance worker tightened a hydraulic fitting, the fork tips slipped off the container edge. The carriage and forks fell, striking his head and pinning him underneath. The forklift operator radioed to call 911. Emergency medical services dispatched to the incident, and the maintenance worker was transferred to the hospital where he succumbed to his injuries.

CONTRIBUTING FACTORS

Key contributing factors identified in this investigation include:

- Lack of specific written maintenance procedures for hydraulic seal replacement

<https://oem.msu.edu/index.php/work-related-injuries/work-related-fatalities>



Photo 1. Incident scene, pallet with material on the ground; arrow indicates forklift involved.
 (Photo courtesy of TOSHA.)

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Warning,
 the next
 picture is
 graphic...



88

88

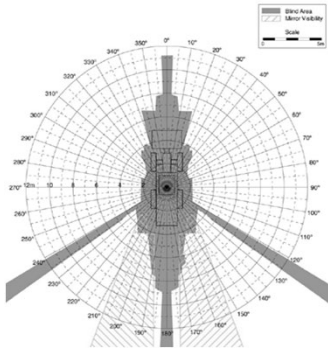

Developing training material

Sources for training material


- Manufacture information
- MIOSHA/OSHA
- Online videos and photos
- Streaming videos
- Examples from the shop floor or worksite
- Industry Associations
- Insurance Companies

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Be a Safe Driver 26



AVOID FALLS AND TIPOVERS

- Stay with your truck. Don't jump from a moving or falling sit-down rider truck.
- Stay away from the edge of docks and ramps.
- Check that bridgeplates and dockboards are secure. Be certain that either the trailer wheels are chocked or the trailer is locked to the dock. Check capacities. Be sure your truck, with load, isn't too heavy for where you are driving.
- Make sure the load you are moving is stable. Spread the forks as far as you can and center the load. Insert forks as far under the load as you can. Be even more careful with long, high or wide loads. They can be less stable.
- Use forward tilt only when you have the load in a rack, over a stack or close to the floor. Use minimum fork tilt to pick up or place a load. When lifting or lowering outside a rack, keep the load backrest vertical or tilted back slightly.
- When moving loads on grades or ramps, drive with your forks pointed upgrade. Without a load, drive with forks downgrade. Slow down, and don't turn on grades or ramps.



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Hierarchy of Controls

Most effective

Least effective

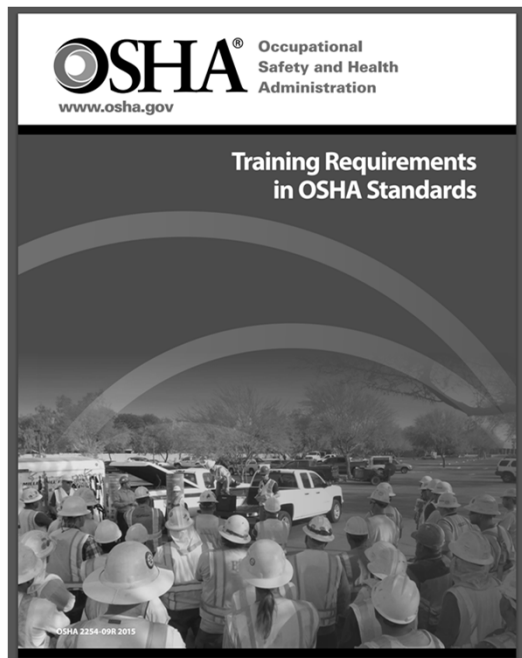
Michigan Worker Death Notification

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OSHA's 2020 Top 10 Most Frequently Cited Violations

92

92



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Utilizing videos



94

94

Personal protection
equipment or PPE
provides excellent
protection. However, it is
only effective if it is used.

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Online Streaming

Caught in/Between Hazards - M276E (15 mins)

MARCOM's Video On Demand (VOD) program on Caught-in/Between Hazards in Construction Environments provides the information employees need to recognize

[PURCHASE DVD](#)
[Full Video](#)
[Preview](#)
[Online Exam \(LMS\)](#)
[Printable Exam \(VOD\)](#)


www.michigan.gov/mioshvideos

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Issues from your own worksite (continued)

The Dangers of Wearing Hoodies at Work

Hoods can extend past your eyes and can block your peripheral vision, which limits your ability to see potential danger around you. This is especially important for heavy equipment operators, or anyone who works in and around forklifts and vehicles.



SAFETY ALERT - #15-2005
HEADS UP - HARDHAT LINERS AND "HOODIES"
 RELEASE DATE: FEBRUARY 1, 2005



The Issues:

With the onset of cold temperatures, workers have been observed wearing kangaroo style hoodies under their hardhats to provide protection from the cold. There are numerous hazards associated with wearing hoodies at our job sites:

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Trade Groups and Insurance Companies

Construction [edit]

- American Institute of Constructors
- American Subcontractors Association
- Associated Builders and Contractors
- Associated General Contractors of America
- Consulting Estimators Round Table

Industry [edit]

- The Aluminum Association
- American Bearing Manufacturers Association
- American Chemistry Council
- American Cleaning Institute
- American Composites Manufacturers Association
- American Forest & Paper Association
- American Gear Manufacturers Association
- American Hardware Manufacturers Association
- American Home Furnishings Alliance



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Summary

- Discuss the value of health and safety training
- Determine who and what needs to be trained
- Design engaging instruction targeted toward their learners' needs
- Explain the requirements to ensure their training is successful

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Assessment

- The purpose of this assessment is to validate the knowledge learned in class.
- Passing score of 70% correct is required.
- Class reference materials/books are not allowed to be used during the assessment.
- Collaboration/discussion with others is not allowed during the assessment.
- Answers will be reviewed after everyone completes and submits their assessment.

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Online Transcript

www.macomb.edu/webadvisor

Choose Noncredit/Continuing Education

Log In

What?

- Check individual courses – Proficient / Not Proficient
- Track courses taken through the MTI
- Request a transcript to show certification
- Manage account information

How?

- Select *What's My User ID?*
- Key in the Last Name and SS# or Macomb ID
- Select *Log In*
- If you need help call 586-498-4106 or email mti@macomb.edu

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Thank You For Attending This Presentation

Michigan Occupational Safety and Health Administration
Consultation Education and Training Division
525 W. Allegan Street, P.O. Box 30643
Lansing, Michigan 48909-8143

For further information or to request consultation, education
and training services, call 517-284-7720
www.michigan.gov/miosha



Effective Safety and Health Training Student Resources

MIOSHA Publications:

[Training General Industry Fact Sheet \(#003\)](#)

MIOSHA Standards:

[Parts 42, 92, & 430. Hazard Communication](#)

[General Industry Safety Part 6. Fire Exits](#)

[Construction Safety Part 6. Personal Protection Equipment](#)

[Construction Safety Part 13. Mobile Equipment](#)

[General Industry Safety Part 33. Personal Protective Equipment](#)

[General Industry Safety Part 85. Control of Hazardous Energy](#)

[General Industry Health Part 380. Occupational Noise Exposure](#)

[General Industry Health Part 433. Personal Protective Equipment](#)

[Construction Health Part 680. Noise Exposure for Construction](#)

Other Resources:

Teachers Corner – Create your crossword puzzle

<https://worksheets.theteacherscorner.net/make-your-own/crossword>

Additional Sample Excel Training Matrix (on student flash drive)

E-Learning Industry – Online Education Resources

<https://elearningindustry.com>

Temporary Worker Initiative:

[Injury & Illness Recordkeeping Requirements for Temporary Workers \(CET-0193\)](#)

[Guidelines for Temporary Workers: A Shared Responsibility \(CET-0196\)](#)

[Multi-Employer Work Sites Instruction \(MIOSHA-COM-04-1\)](#)

[Federal OSHA Temporary Worker Webpage](#)

MIOSHA Training Institute (MTI) Resources:

www.michigan.gov/mti

MIOSHA Training Calendar:

www.michigan.gov/mioshatraining

MIOSHA Homepage:

www.michigan.gov/miosha



Michigan Department of Labor and Economic Opportunity
Michigan Occupational Safety and Health Administration
Consultation Education and Training Division
525 W. Allegan St., P.O. Box 30643
Lansing, Michigan 48909-8143

For further information or to request consultation, education and training services
call 517-284-7720

or

visit our website at www.michigan.gov/miosha

www.michigan.gov/leo

LEO is an equal opportunity employer/program.