

Most Cited Manufacturing
NAICS codes 31, 32 & 33
January 2016 – December 2016



TOSHA believes the information in this presentation to be accurate and delivers this presentation as a community service. As such, it is an academic presentation which cannot apply to every specific fact or situation; nor is it a substitute for any provisions of 29 CFR Part 1910 and/or Part 1926 of the Occupational Safety and Health Standards as adopted by the Tennessee Department of Labor and Workforce Development or of the Occupational Safety and Health Rules of the Tennessee Department of Labor and Workforce Development.

This training is NOT to be used in lieu of annual or initial safety & health training. Management is required to conduct onsite specific training.



#20 – 1910.23 Guarding Floor & Wall Openings & Holes

- Floor openings (12 inches or more)
- Floor holes (less than 12 inches)
- Open-sided floors & platforms higher than 4 foot guarded with standard railing & toe-board
- Standard railing – top rail, intermediate rail & posts, with a vertical height of at least 42 inches
- Standard railing, post, & framing members withstanding 200 lbs.
- Flight of stairs 4 or more risers with standard handrails



#19 – 1910.22 General Requirements - Housekeeping

- Passageways, storerooms, & service rooms are kept clean, orderly, & sanitary
- Floors kept dry
- Overhead storage load levels posted
- Permanent aisles & passageways marked



#18 – 1910.215 Abrasive Wheel Machinery

- Tongue Guard – 1/4 inch
- Work rest – 1/8 inch, rigid construction, adjustable, secured
- Mounting - Ring test
- Flanges
- Anchored
- Peripheral guard adjustable with decreasing diameter of wheel
- Contact surface of wheel free of foreign matter



#17 – 1910.132 Personal Protective Equipment (PPE)

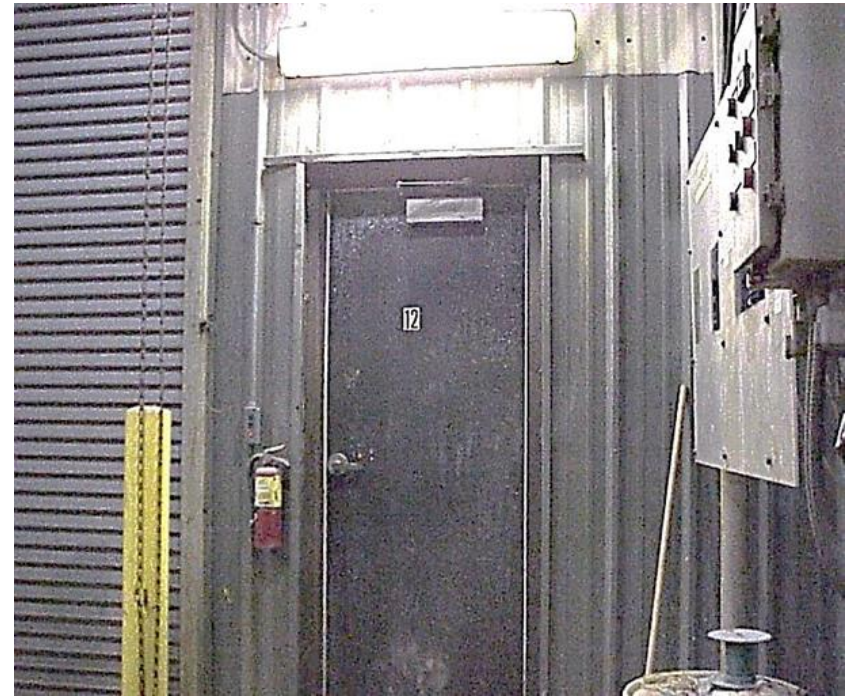
- Payment for PPE
- Hazard Assessment
 - Written Certification Assessment
 - Workplace evaluated
 - Person doing the certification
 - Date of the assessment
 - Id of the document as a PPE certification
- Training
 - When PPE is necessary
 - What PPE is necessary
 - How to properly don, doff, adjust, & wear PPE
 - Limitations of PPE
 - The proper care, maintenance, useful life, & disposal of PPE
- OSHA PPE assessment

<https://www.osha.gov/Publications/osha3151.pdf>



#16 – 1910.37 Maintenance, Safeguards, & Operational Features of Exit Routes

- Clearly visible & marked by “EXIT” sign
- Exit routes maintained, free, & unobstructed
- Marked “EXIT” or “NOT AN EXIT “
- Illuminated surface of at least 5 foot candles on “EXIT” sign



#15 – 1910.36 Design & Construction Requirement for Exit Routes

- Exit Doors locked from the inside
- Exit access at least 28 inches wide at all points



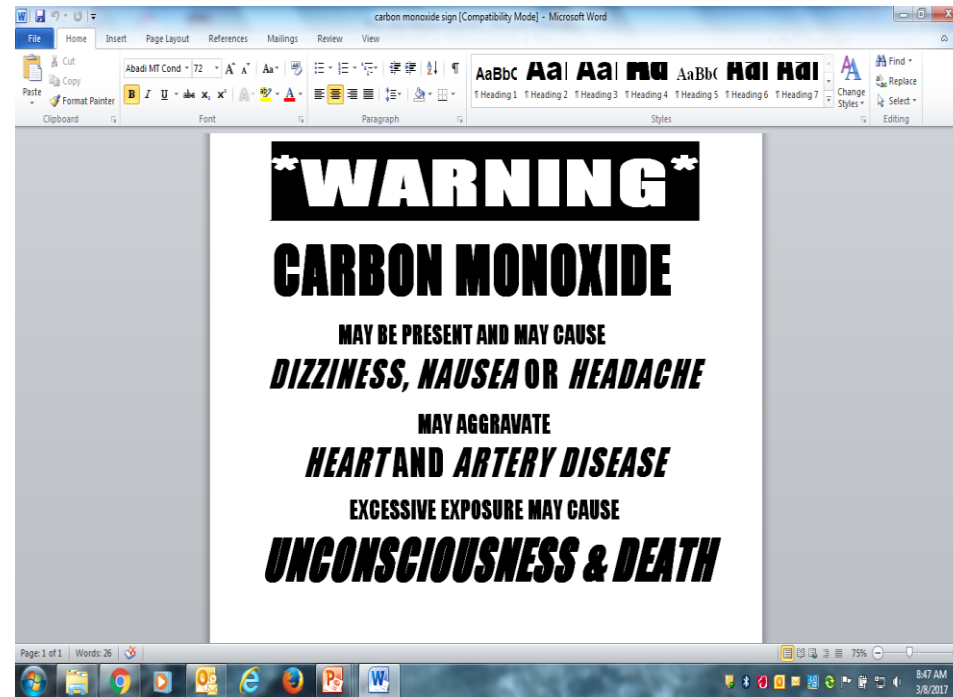
#14 – Hand Protection

- Evaluation & selection of appropriate hand protection for hazard
- TDLWD Rule – Z1A table & skin designation (X) - <http://share.tn.gov/sos/rules/0800/0800-01/0800-01-01.20170129.pdf>
- NIOSH – Data base for selection of chemical protective clothing <https://www.cdc.gov/niosh/ncpc/>



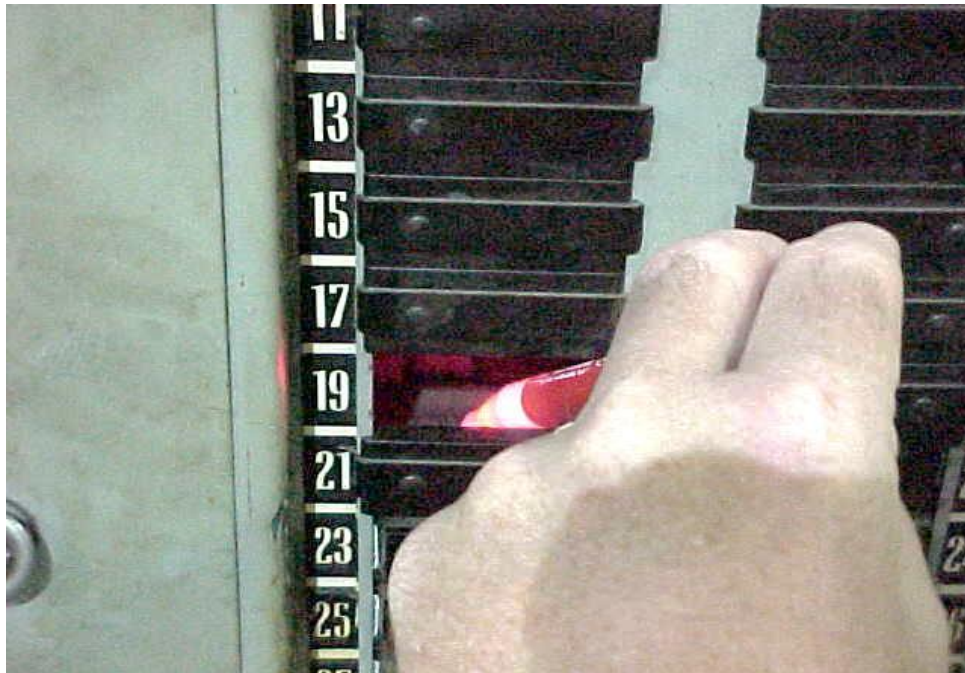
#13 – TDLWD Rule 0800-01-09 – Tennessee Right to Know

- Labeling of non-containerized hazardous chemicals
- Annual training on hazardous chemicals
- As a minimum - training records with identification of who training was given, date, & description of training
- Web link to rule:
<http://share.tn.gov/sos/rules/0800/0800-01/0800-01-09.20141128.pdf>



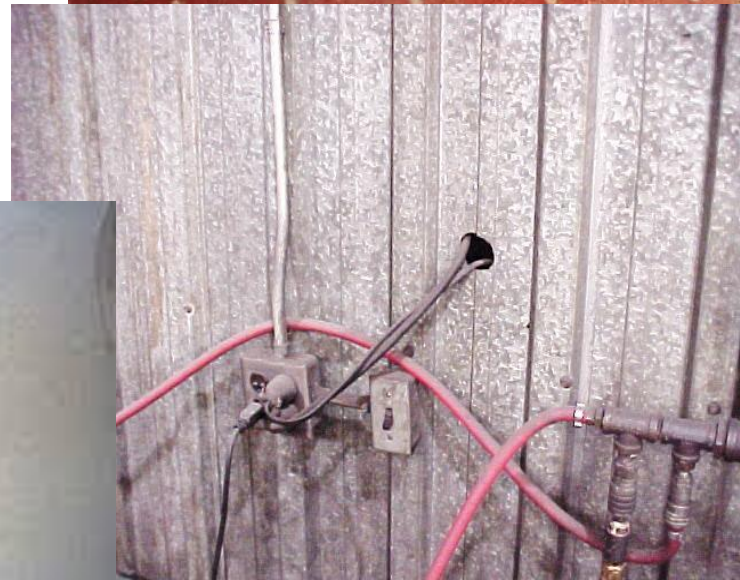
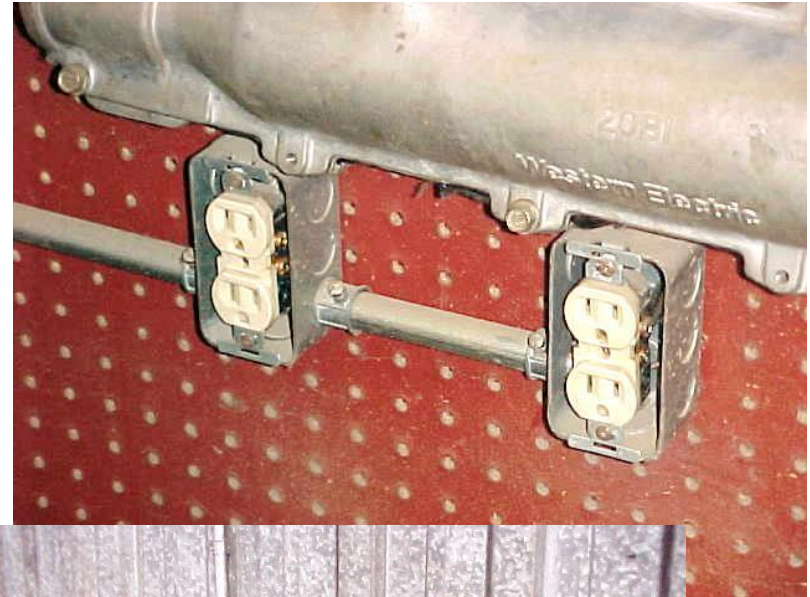
#12 – 1910.305 Electrical Wiring Methods, Components, & Equipment for General Use

- Unused opening in cabinets, boxes, or fittings not closed



#12 – 1910.305 Electrical Wiring Methods, Components, & Equipment for General Use

- Lack of covers
- Improper use of flexible cords – substitute for fixed wiring, ran through holes, attached to building surfaces, & continuous lengths without splice or tap
- Lack of strain relief on flexible cords
- Protection from abrasion



#11 – 1910.178 Powered Industrial Trucks

- Operators evaluated every three years
 - An evaluation of each powered industrial truck operator's performance must be conducted:
 - After initial training,
 - After refresher training, &
 - At least once every three years
- Unsafe trucks taken out of service – defective or unsafe – photo unsafe tires
- Lack of daily inspection of industrial truck



#11 - 1910.178 Powered Industrial Trucks

- Training shall consist of a combination of:
 - Formal instruction (e.g., lecture, discussion, interactive computer learning, written material);
 - Practical training (demonstrations & exercises performed by the trainee); &
 - Evaluation of the operator's performance in the workplace
- Certification – **THE EMPLOYER shall certify** that each operator has been trained & evaluated by section (I) of this standard



#11 - 1910.178(I) Powered Industrial Trucks

- Truck related topics:
 - A. Operating instructions, warnings, & precautions for types of truck operator will be using
 - B. Differences between the truck & automobile
 - C. Truck controls & instrumentation – location, what they do, how they work
 - D. Engine or motor operation
 - E. Steering & maneuvering
 - F. Visibility – due to loading
 - G. Fork & attachment adaptation, operation, & use limitations
 - H. Vehicle capacity
 - I. Vehicle stability
 - J. Any vehicle inspection & maintenance that operator will perform
 - K. Refueling &/or charging of batteries
 - L. Operation limitations
 - M. Any other operating instruction, warning, or precautions listed in the operators manual for the type of truck operator will be using



#11 - 1910.178(l) Powered Industrial Trucks

- Workplace related topics:
 - A. Surface conditions where the vehicle will be operated
 - B. Composition of loads to be carried & load stability
 - C. Load manipulation, stacking, & unstacking
 - D. Pedestrian traffic in areas where the vehicle will be operated
 - E. Narrow aisles & other restricted places where the vehicle will be operated
 - F. Hazardous locations where the vehicle will be operated
 - G. Ramps & other sloped surfaced that could affect the vehicles stability
 - H. Closed environments & other areas where insufficient ventilation or poor vehicle maintenance could cause a buildup of carbon monoxide or diesel exhaust – battery charging areas & hydrogen gas
 - I. Other unique or potentially hazardous environmental conditions in the workplace that could affect safe operation



#10 – TDLWD Rule 0800-01-03 - Recordkeeping

- Maintain 300 log, 300A & 301 when required
- Required documentation on the log & completion of 301
- Privacy cases
- Copy of records in 4 hours
- Certify 300A
- Report fatality within 8 hours
- Web link to rule:

<http://share.tn.gov/sos/rules/0800/0800-01/0800-01-03.20161124.pdf>

The image shows a screenshot of OSHA's Form 300, titled "Log of Work-Related Injuries and Illnesses". The form is a large grid with columns for "Date", "Description of Incident", "Employee Name", "Job Title", "Department", "City", "State", and "Zip". The grid is designed for recording individual incidents, with rows for each incident and columns for tracking various details. The form is part of a larger document, as indicated by the "Page 1 of 2" label at the bottom right.

#9 – 1910.219 – Mechanical Power – transmission apparatus

- Shaft ends smooth & projecting no more than $\frac{1}{2}$ diameter of shaft while not guarded
- Guarding pulleys & horizontal belts 7 feet or less from floor
- Guarding sprocket wheels & chains below 7 feet



#8 – 1910.134 Respiratory Protection

- Proper selection
- Written program
- Medical evaluation
- Annual fit testing
- Care, use, cleaning, storage, maintenance, emergencies, limitations
- Appendix D – voluntary use
- Training – initially & annually
- Program review
- Improper storage – photo of improper storage of N95 to protect from damage/contamination



Note: New silica standard – 6/23/2018 -
<https://www.osha.gov/dsg/topics/silicacrystalline/>

#7 – 1910.133 Eye & Face Protection

- Protect the eyes & face from
 - flying particles,
 - molten metal,
 - liquid chemicals,
 - acids or caustic liquids,
 - chemical gases or vapors,
 - or potentially injurious light radiation

NOTE: In 2015 - Eye & Face Protection Standards recognize the ANSI/ISEA Z87.1- 2010. The update further differentiates protectors based on specific risks. Make sure glasses are stamped with “Z87+” to indicate an impact protector – “Z87” will now mean non-impact protector.



#6 - 1910.151 Medical Services & First Aid

- Emergency eye wash or safety shower
 - Corrosive (SDS & pictogram) with a splash potential for eyes, face, & body
 - 15 minute flush
 - ANSI – “activate” weekly



#6 - 1910.151 Medical Services & First Aid

- Trained in first aid - Train at least 1, & preferably 2 or more, persons on each shift on first-aid when
 - Life threatening injuries can be reasonably anticipated, trained personnel must be available within 3-4 minutes
 - If serious injuries other than life threatening are possible, the response time is extended to 15 minutes
- Designate first aid trained workers & inform other workers of who they are



Note: A written Exposure Control Plan is required for first aid providers -1910.1030

#5 – TCA 50-3-105(1)

Each employer shall furnish to each of its employees conditions of employment & a place of employment free from recognized hazards that are causing or are likely to cause death or serious injury or harm to its employees.

- A general duty citation must involve both the presence of a serious hazard & exposure of the cited employer's own employees.
1. The employer failed to keep the workplace free of a hazard to which employees of that employer were exposed;
 2. The hazard was recognized;
 3. The hazard was causing or was likely to cause death or serious physical harm; &
 4. There was a feasible & useful method to correct the hazard.

#4 – 1910.157 Portable Fire Extinguishers

- Accessible, mounted, identified
- Fully charged & in designated locations
- Monthly visual inspection
- Annual maintenance check



#4 - 1910.157 Portable Fire Extinguishers

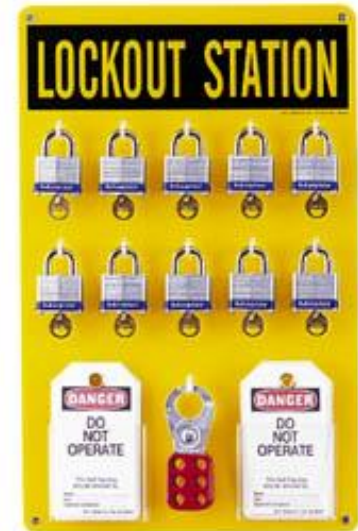
Where fire extinguishers are provided for employee use, the employer shall provide:

- An educational program to familiarize employees with the general principles of fire extinguisher use
- Hazards of incipient stage fire fighting
- Training conducted initially & annually
- Part of a good S&H program
 - actual “hands on” training where employee discharges an extinguisher
 - do not have to put out a real fire, but can simulate the pull, aim, squeeze, sweep method & become familiar with operation & feel



#3 – 1910.147 The Control of Hazardous Energy (Lockout/Tagout)

- **Energy control program**
 - **4 Critical Elements For an Effective LOTO Program**
 - Detailed energy control procedures
 - Extensive LOTO training
 - Re-evaluate & reinforce LOTO training
 - Discipline
- **Control procedures developed, documented & used**
 - Notification of employees – who is authorized/affected
 - Preparation for shutdown
 - Machine or equipment shutdown
 - Machine or equipment isolation
 - Lockout/tagout device application
 - Stored energy
 - Verification of isolation
 - Release from lockout/tagout



#3 – 1910.147 The Control of Hazardous Energy (Lockout/Tagout)

- **Annual inspection of energy control procedures**
 - The annual inspection involves an authorized employee other than the one(s) utilizing the energy control procedure being inspected. This can be done in a group or on an individual basis
- **Each authorized employee not trained**
 - Each authorized employee shall receive training in the recognition of applicable hazardous energy sources, the type, & magnitude of the energy available in the workplace, the methods, & means necessary for energy isolation & control

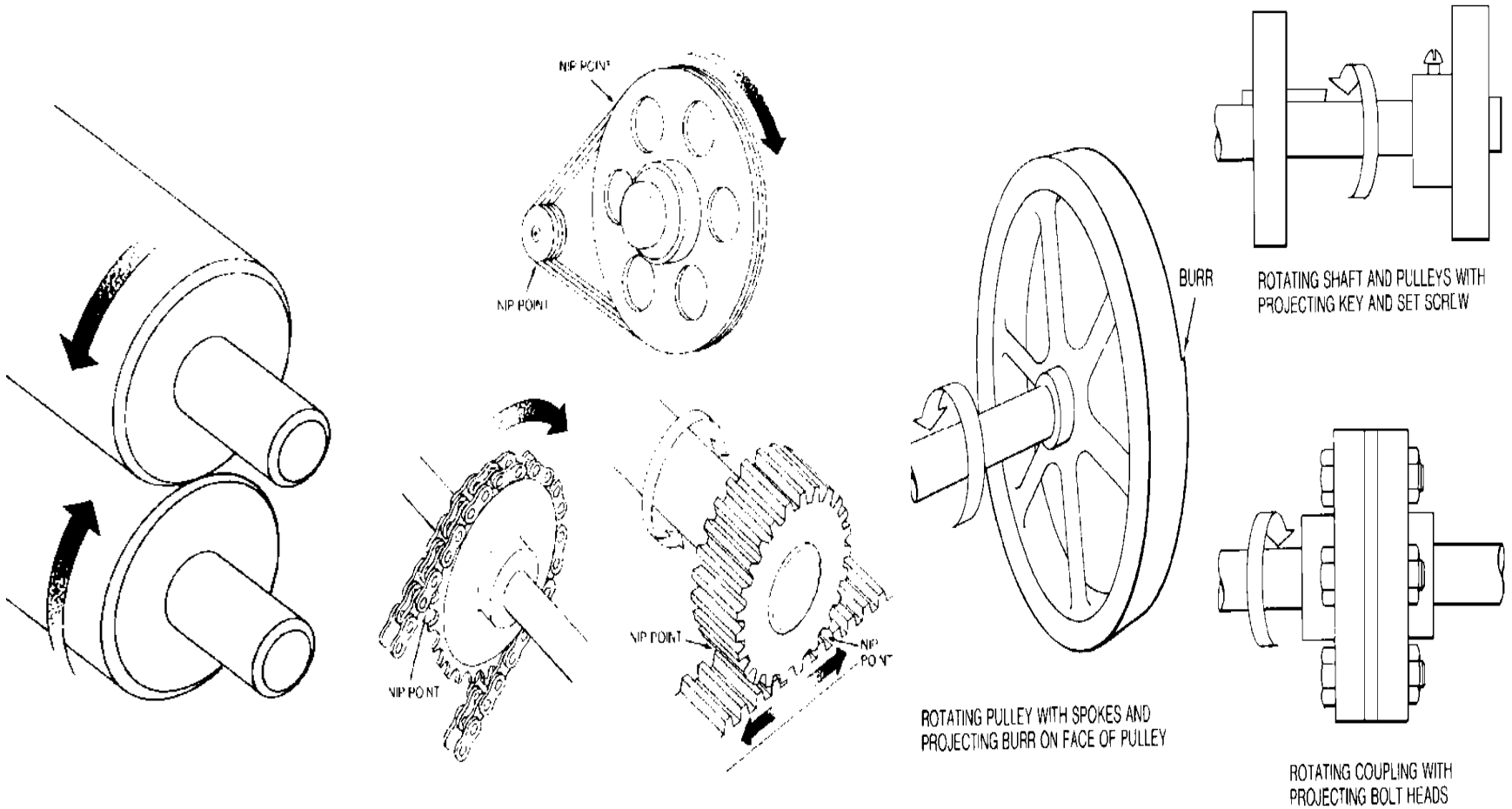


#2 – 1910.212 General Requirements for all Machines (Machine Guarding)

- Point of operation – two handed activation
- Guard gears, sprockets, belts, pulleys, & shafts
- Anchor machinery that may move during operation
- Guarding fan blades less than 7 feet high
- **Guarding of robotics – ANSI-RIA R15.06-1986**



#2 - 1910.212 General Requirements for all Machines (Machine Guarding)



Note: Shaft must not project greater than ½ diameter of shaft unless guarded

#1 – 1910.1200 Hazard Communication


- Written program
- SDS – Safety Data Sheets & accessibility
- Labels – identity, signal word, pictogram, hazard statements –
- In house chemical labels – identity & hazard statements
- Training – basic recall
- GHS – June 2015
 - Written program
 - Labels
 - Pictograms
 - SDS

SAMPLE LABEL

CODE _____
Product Name _____ } **Product Identifier**

Company Name _____
Street Address _____
City _____ State _____ } **Supplier Identification**
Postal Code _____ Country _____
Emergency Phone Number _____

Hazard Pictograms



Signal Word
Danger

Hazard Statements
Highly flammable liquid and vapor.
May cause liver and kidney damage.

Precautionary Statements
Keep container tightly closed. Store in a cool, well-ventilated place that is locked.
Keep away from heat/sparks/open flame. No smoking.
Only use non-sparking tools.
Use explosion-proof electrical equipment.
Take precautionary measures against static discharge.
Ground and bond container and receiving equipment.
Do not breathe vapors.
Wear protective gloves.
Do not eat, drink or smoke when using this product.
Wash hands thoroughly after handling.
Dispose of in accordance with local, regional, national, international regulations as specified.

Supplemental Information
Directions for Use

Fill weight: _____ **Lot Number:** _____
Gross weight: _____ **Fill Date:** _____
Expiration Date: _____

In Case of Fire: use dry chemical (BC) or Carbon Dioxide (CO₂) fire extinguisher to extinguish.

First Aid
If exposed call Poison Center.
If on skin (or hair): Take off immediately any contaminated clothing. Rinse skin with water.

#1 - 1910.1200 Hazard Communication

- Basic Recall of training:
 - What is this training about?
 - What hazardous chemicals are you exposed to?
 - Where are these chemicals present?
 - What are the short and long term effects?
 - How can you detect if you are overexposed?
 - How can you protect yourself?
 - Where are the MSDS (SDS) and written program?
 - What do the pictograms mean?
 - What is the new format for Safety Data Sheets?



NOTE: Always interview staff for knowledge of safety & health policies

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Resources

- www.osha.gov & <http://www.tn.gov/workforce/section/tosha>
- www.cdc.gov & www.cdc.gov/niosh
- Memphis Office 901-543-7259
- Jackson Office 731-423-5640
- Nashville Office 615-741-2793
1-800-249-8510
- Knoxville Office 865-594-6180
- Kingsport Office 423-224-2042
- Chattanooga 423-634-6424
- Consultative Services 1-800-325-9901