



Industrial Technology Virtual Learning

General Metals/Safety

April 9th, 2020



General Metals

Shop Safety April 9th, 2020

Objectives

- Explain why it is important to develop safe work habits
- Dress in the proper safety equipment and clothing for a machine shop
 - Recognize and correct unsafe work practices
 - Apply safe work practices when employed in a machine shop
- Select the appropriate fire extinguisher for a particular type of fire

Getting Started

- Do you Practice the following safety?

Safety in the Shop

- Keep shop clean
- Exercise care when machining unfamiliar materials
- Wear respirator and special protective clothing, when necessary
- Remember shop is a place to work, not play

<https://nasdonline.org/7080/d002333/tips-on-shop-safety.html>

Safety in the Shop (Cont.)

- If ill or using medication, make sure it is safe to operate machinery
- Correctly dispose of rags daily
 - Minimizes the possibility of spontaneous combustion
- Keep hand tools in good condition and stored properly

Safety in the Shop (Cont.)

- Use care when handling long sections of metal stock
- Ask for help when moving heavy items
- Dress properly at all times
- Ensure adequate ventilation
- Know your job

Practice

- List situations or conditions that you feel are unsafe or not suitably protected to prevent possible injury in your school shop.

Cleaning Extensive Spills



(3M Company)

Appropriate Safety Equipment



Appropriate Safety Equipment (Cont.)

- Earplugs
- Plastic gloves
- Dust masks
- Approved respirator
- PPE
- Safety glasses, goggles, and face shields
 - Should all be Occupational Safety and Health Administration (OSHA) approved

<https://www.osha.gov/SLTC/personalprotectiveequipment/>

General Machine Safety

- Never operate machine until all guards are in place
- Keep floor around machine clean and clear
- Do not talk while operating a machine
- Never remove chips or cuttings with hands while machine is operating
- Secure prompt medical attention for any injury

<https://www.osha.gov/SLTC/machineguarding/>

General Tool Safety

- Never carry sharp-pointed tools in pockets
- Make sure all tools are properly sharpened, in good condition, and fitted with suitable handles

<https://ohsonline.com/articles/2010/03/19/power-tool-safety-tips-from-osa.aspx>

Which of the following is defined as an unplanned event that results in damage to property?

-Hazard

-Injury

-Accident

-Violation

Answer: Accident

Which of the following
can often result in
carelessness when
operating a tool?

- Using a tool repeatedly
- Wearing gloves
- Using the wrong tool
- Awareness of your surroundings

Answer: using a
tool repeatedly

Which of the following is a form of PPE?

- Flammable substance
- Abrasion
- Good communication
- Safety glasses

Answer: Safety
glasses

Which of the following is
an example of a safety
device on a tool?

- Gloves
- Hazard
- PPE
- Guards

Answer: Guards

Keeping your work area clean is known as which of the following?

- Personal protective equipment
- Good housekeeping
- Ergonomics
- Good communication

Answer: Good
housekeeping

_____ is an important two word phrase that means safe work practices must always be your main priority

- Good housekeeping
- Safety first
- Always first
- Heads up

Answer: Safety first

Anything that can cause
harm to you or others is
known as _____

- Accident
- Poisonous
- Hazard
- Scary

Answer: Hazard

Lack of _____ with tools is one of the most common causes of work related injuries.

- Practice
- Training
- Awareness
- Knowledge

Answer: Training

Answer: first aid
station

A _____ is any sort of damage done to the body.

-Injury

-Accident

-Crime

-Stoppage

Answer: injury

Safety is a less important concern with the hand tools than it is with power tools.

-True

-False

Answer: False

Storing tools properly is a way of practicing safe work habits.

-True

-False

Answer: True

Loose clothing is
considered a safety
hazard.

-True

-False

Answer: True

Lack of familiarity with tools is among the most common causes of work related injuries

-True

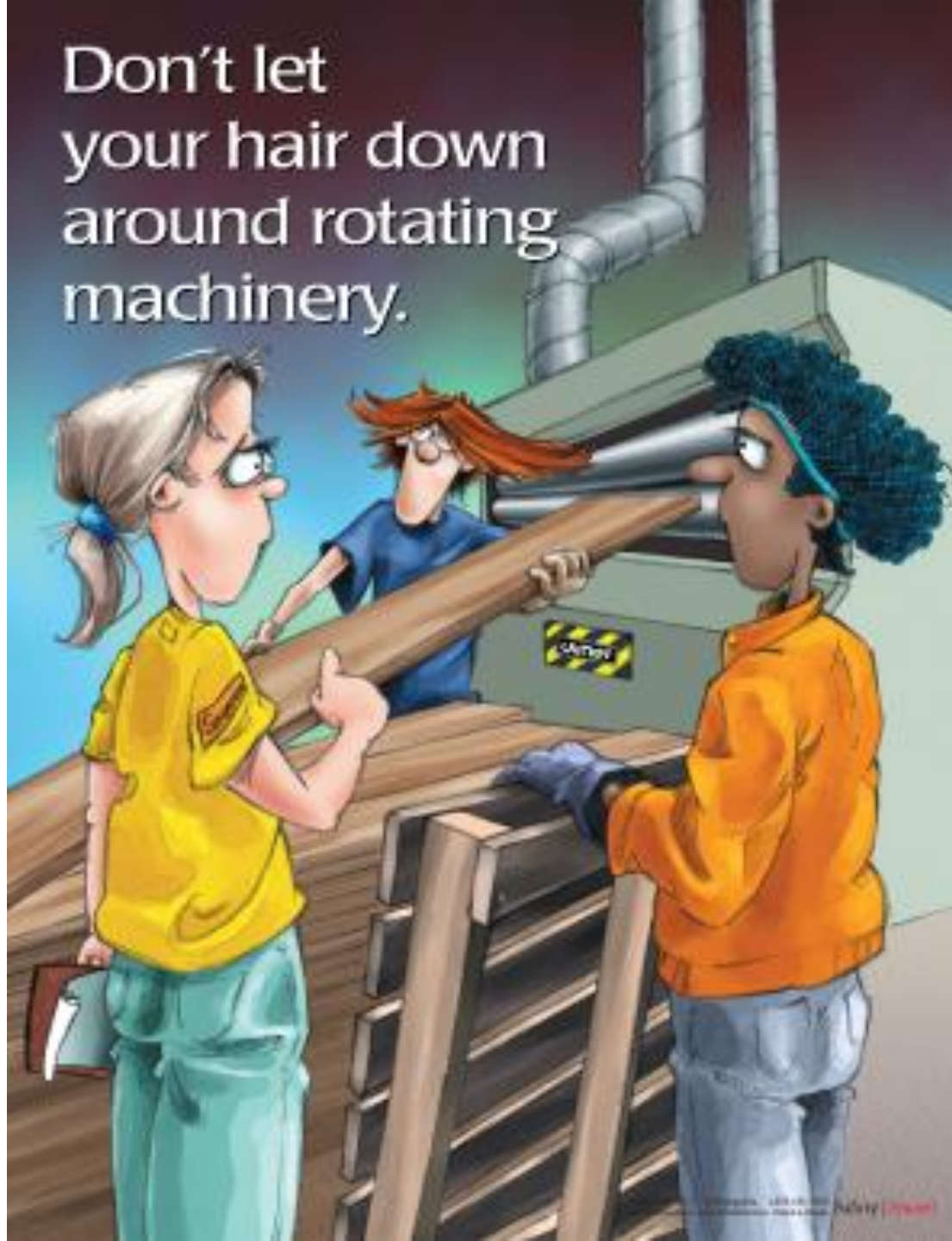
-False

Answer: True

Safety Posters

- Make a safety poster on one of the machines in your school shop.
- Be creative with your poster.
- The following are examples of posters

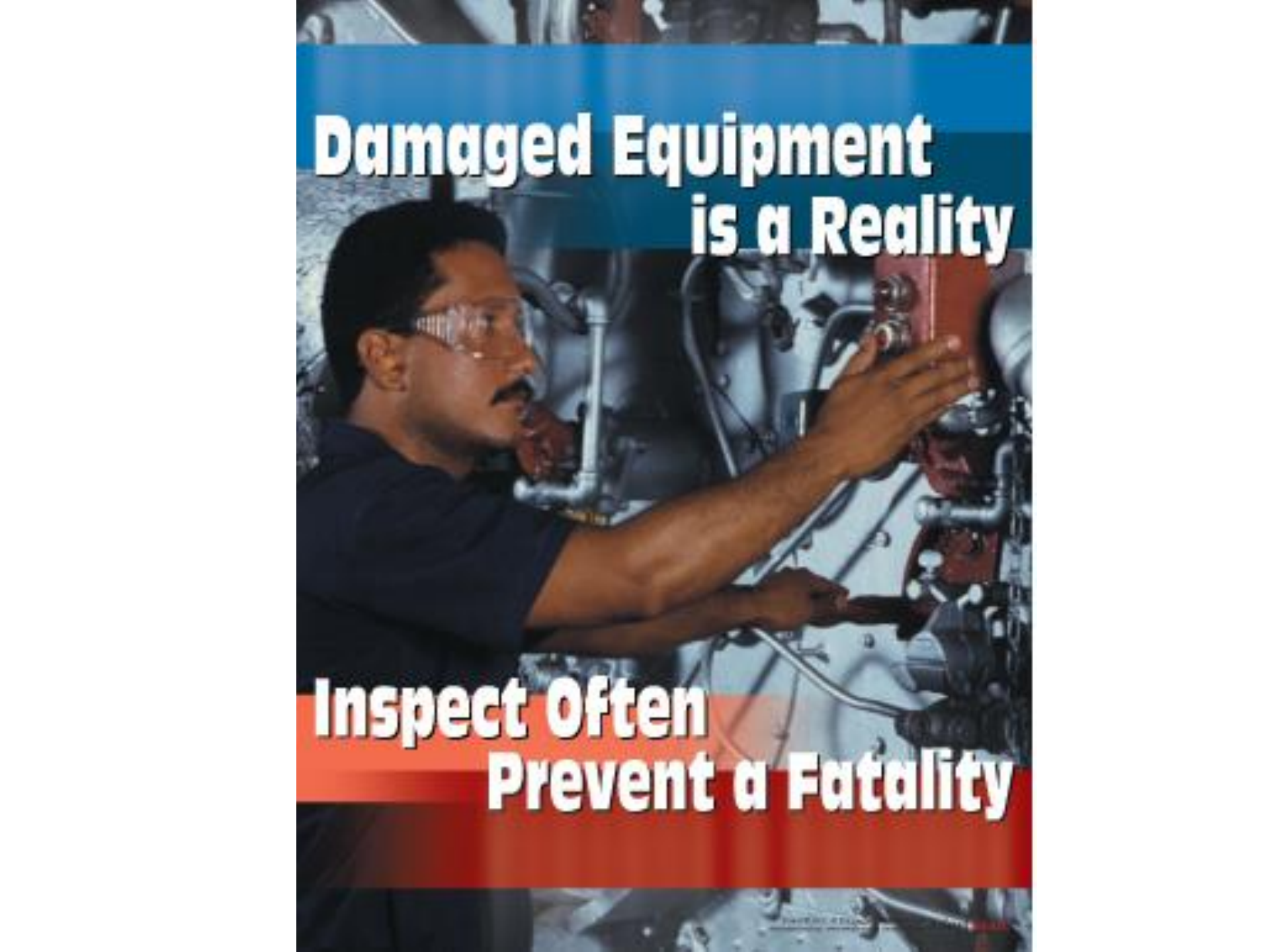
Don't let
your hair down
around rotating
machinery.



Caught Between Steel And A Hard Place

INATTENTION
CAN BE...
DISARMING

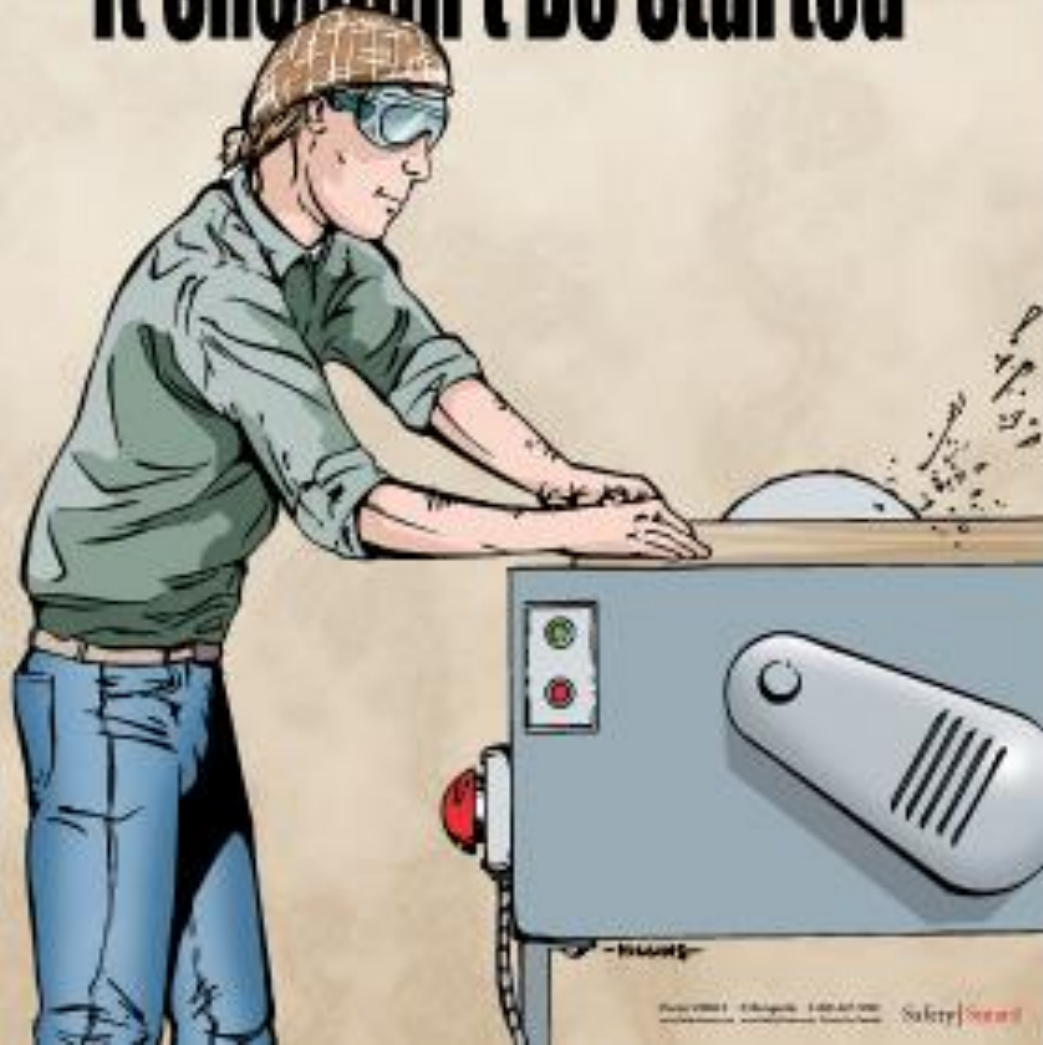


A man with a mustache, wearing safety glasses and a dark blue short-sleeved shirt, is working on a large, complex industrial engine. He is using a tool, possibly a wrench, on a red component of the engine. The background shows various pipes, hoses, and mechanical parts of the engine.

**Damaged Equipment
is a Reality**

**Inspect Often
Prevent a Fatality**

If Machinery Isn't Guarded It Shouldn't Be Started



**Jewelry entanglement in machinery can
remove a ring faster than any divorce**



**AND YOU COULD LOSE MUCH MORE
THAN THE RING**

RESPECT MACHINE GUARDS.

They are there to protect you.



Machines are safe



—when safety rules
are followed



**NEVER SHORT CUT
THE GUARDS THAT ARE
THERE TO PROTECT YOU**