## Monthly Safety Topic

## May 2020 - Hand and Finger Injuries

The GAWDA Safety Committee identified "Hand and Finger Injuries" as a high injury area within our membership, but with the potential for substantial injury reduction. The approach the committee took in addressing this task is:

1. Provide some general educational information about hand and finger injuries.
2. Make specific suggestions on how to identify and control hazards that can lead to hand and finger injuries.
3. Identify some of the leading causes and control measures of these injuries in our industry.

### 1. General Information

Hands and fingers are among the most frequently injured parts of the body. When you think about how much we use our hands, it's not hard to understand why injuries to the fingers and hands are common. That's because whatever you're doing, your hands are on the front lines. The National Safety Council reported that in a recent year there were 530,000 disabling hand and finger injuries. The average is about 500,000 per year. Nearly one out of four on-the-job accidents involve these parts of the body.

To help reduce these injuries, it's important for employees to learn about the most common hazards to these body parts. Paying a little more attention to your hands and the surrounding work area could have prevented most of these injuries. Almost any thing in the workplace can be a hand hazard: **hand or power tools, chemicals, scrap, fire and all material handling activities**. But, keep in mind that about 80% of these injuries are caused by pinch points, which have a nasty habit of catching us when we aren't looking or paying attention. The following are some of the basic precautions that can be taken to protect your hands and fingers.

### Basic Protections

- Always wear gloves when changing blades in label scrapers.
- Scrape cylinder labels away from your body.
- Always cut away from your body.
- Use brushes, not hands, to sweep up metal or wood chips.
- Check materials for sharp edges, burrs, splinters, etc. before handling them.
- Wipe off greasy or slippery objects before handling them.
- Make sure doorways are clear and aisles are wide enough when moving materials manually.
- Lift the object so your hands are not near the pinch point.
- Keep fingers on the sides, not the top or bottom, of spacers when you're stacking material.
- Put materials down carefully so you don't crush your fingers.
- Use the right tool for the job and use it correctly.
- Store tools so no sharp edges are exposed.
- Pass - don't throw -tools to other workers, handle first.

- Follow manufacturer's instructions for proper use of tools and equipment.
- Feed material into moving machinery with a push stick, not your hands.
- Keep your hands away from moving machine parts.
- Make sure you know how hot or cold an object is before handling it.
- Do not use a pocketknife as a tool.
- Wear proper gloves for any tasks that are not delicate or do not have a risk of getting the glove caught in moving machine parts.
- Select gloves to protect against the job's specific hazards.
- Use material safety data sheets to determine what gloves you need for chemical protection.

Guards are your best protection from getting your hands or fingers caught and injured by tools and machines. It's up to each employee and the company to make sure that every tool or piece of equipment has the proper guards. It's up to you to see that the guards stay in place and to make sure the guards are working right. Otherwise, don't use the tool.

**2. Identifying and Controlling Hazards**

One approach to identifying the hazards (a condition or practice with the potential to cause hand or finger injury) is to conduct a risk assessment where not only you identify the hazards but you determine the level of risk for that hazard (the likelihood of that hazard causing a hand or finger injury) and then determining the preventive measures needed to eliminate/reduce the risk to an acceptable level.

The following are two examples of how this process works.

> **Example 1**
> During your risk assessment you identify that employees are using their pocketknife in a variety of ways as a tool. This is the hazard. Next you determine the likelihood of that hazard causing a hand or finger injury and then you determine the preventive measures that you must take to eliminate or reduce the risk of injury by using a pocketknife as a tool.
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> **Example 2**
> During your risk assessment you identify that congestion and tight quarters, because of large numbers of full and empty cylinders, in the fill plant and on the docks have resulted in narrow work areas for moving cylinders. The hazard is narrow work areas for moving cylinders because of congestion. Next you determine the likelihood of pinch point type hand and finger injuries while moving cylinders through narrow work areas because of the congestion and tight quarters. Then you determine the appropriate preventive measures that must be taken to eliminate or reduce the risk of injury because of the limited space for moving cylinders. **Do you have clear designated aisles that are wide enough that cylinders can be moved safely with the proper hand clearance?**

This process will work for you and make it easier to identify and understand how injuries (hand and finger) in this particular case can happen. What is the likelihood and what are the appropriate control measures to reduce or eliminate the risk?

A risk assessment may require different preventive measures to get to the best resolution for eliminating/reducing the risk of injury or loss to an acceptable level. These are some of the preventive measure techniques that you may want to consider:

- **Engineering Controls-** Your risk assessment may determine for example that you should modify the design of the workstation by moving the cylinders closer to the area of filling; or have a different design of cylinder cart that is more user friendly; or redesign tools or replace existing tools that better meet the needs of the employee and the task being performed; or provide tools with a selection of handle sizes so that each employee can be properly fitted with the right tool size.

- **Work Practice Controls-** Another preventive measure may be a change in how the task is performed. Your risk assessment may conclude, for example, that cylinders should not be rolled, but moved by cylinder carts if the cylinder movement is more than 10 feet.

- **Safety Training and Management Coaching**- Proper training and good management and coaching are critical to a successful safety program. Your risk assessment may determine that the employees were not properly trained to avoid hand and finger injuries related to our industry. Management follow up in the form of employee observations and audits for compliance are necessary to ensure employees understand what is required and why it is necessary to follow established safety rules and prescribed work practices.

**3. Causes and Controls of Hand and Finger Injuries in Our Industry**

In this section, the committee has produced what they believe are the leading causes of hand and finger injuries within our membership. It also identifies control measures that can eliminate or reduce the risk of injury to the hands and fingers, if effectively implemented. This section can be used in conjunction with the above information as a training tool to promote hand and finger safety in the workplace.

## Major Causes of Hand and Finger Injuries in Our Industry

**Fingers caught between two cylinders or other stationary objects such as walls, door ways, truck beds, etc.**

- Consider the use of cylinder carts when the movement is 10 feet or more.
- As a minimum, promote the use of cylinder carts.
- Eliminate congestion in fill plant and docks. Make sure doorways are clear and aisles are wide enough to provide proper hand clearance.
- Properly train the employee on how to approach the cylinder(s), where to place hands and how to use the cylinder cart properly.
- Select the right cart for the job. Harper model 742-16 or Saf-T-Cart model 750-20H are considerations, although there are many other carts to choose from.
- Properly maintain the carts and remove defective carts from service.

- Require the use of gloves.
- Audit for compliance.

**Hands and fingers suffer cuts during scraper blade changing and the removal of cylinder labels.**

- Consider not allowing the window type razor scrapers. Select the safest tool possible.
- Require the use of gloves.
- Train employees on proper use of tools.
- Observe employees to ensure tool is used properly.

**Holding the liquid cylinder ring and fingers get caught if the cylinder slides off the hook catching fingers between the ring and the cart.**

- Select the right cart for the job. Look for a cart with an adjustable hook and pneumatic tires (Harper or Saf-T-Cart are considerations).
- Liquid carts must be properly maintained and removed from service if any defects exist.
- Employees must be properly trained in the safe use and proper hand placement when using carts.
- Require the use of gloves.
- Audit for compliance.

**Cuts on hands in maintenance type activities.**

- Use proper tool for the job.
- Remove defective tools from service.
- Always cut away from hands and body.
- Proper placement of hands.
- Require the use of gloves