

# Operator Training for Overhead Cranes

*Presented by:*  
*Piedmont Hoist & Crane, Inc.*

# Welcome

- Operator Training for Overhead Cranes

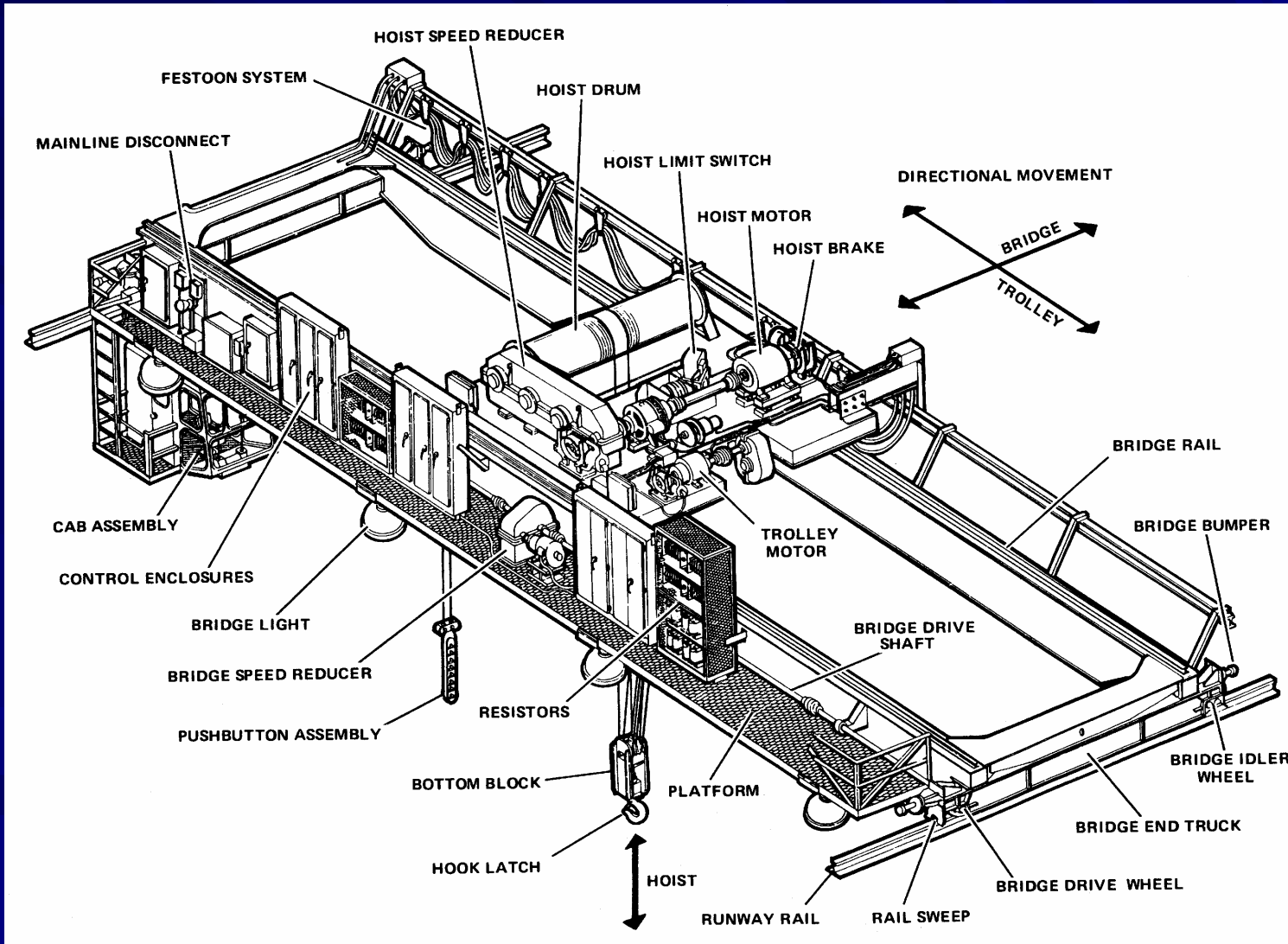
## ***You will learn:***

- ✓ Proper operation and daily inspection procedures for overhead cranes.
- ✓ Proper rigging and inspection procedures for slings.

# Agenda

- **About Piedmont Hoist & Crane, Inc.**
- **About your trainer**
- **Crane Terminology**
- **Definitions**
- **Safe Operating Video**
- **Do's & Don'ts**
- **OSHA Required Inspections & Regulations**
- **Daily Operator Checklist**
- **Discussion of Damaged Items**
- **Standard Crane Signals**
- **Break**
- **Sling Basics – “The right sling for the right job”**
- **Requirements for all types for slings**
- **Rigging Video**
- **Effects of Angle on rated loads**
- **Sling Inspection Procedures/Care & Maintenance**
- **Required Documentation**
- **Test**
- **Questions & Answers**

# Crane Terminology



# *Daily Operator Inspection*

- Have you been trained and are you authorized to use the equipment?
- Your work area:
  - ✓ Locate the system disconnect.
  - ✓ Look for warning signs and obstructions.
  - ✓ Are there other employees in the area?
  - ✓ Know your load – size, weight, balance points.
  - ✓ Do you have the necessary rigging to properly secure the load?

# Examples of Chain Damage



# Safe Operating Practices

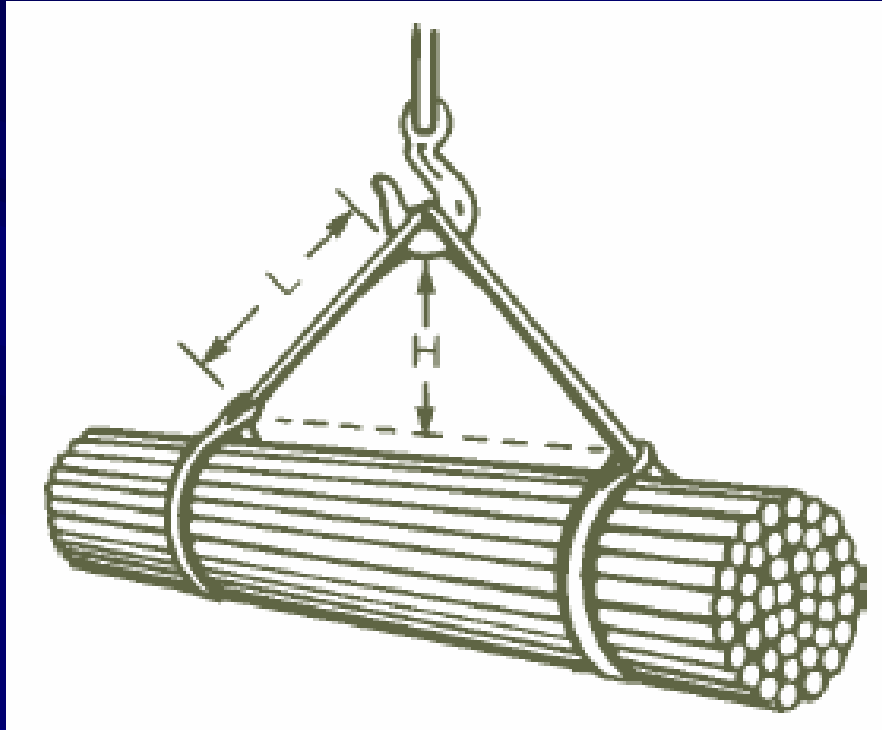


- Slings shall not be shortened with knots, bolts, or makeshift devices.



- Sling legs shall not be kinked or twisted

# Reduced Capacity

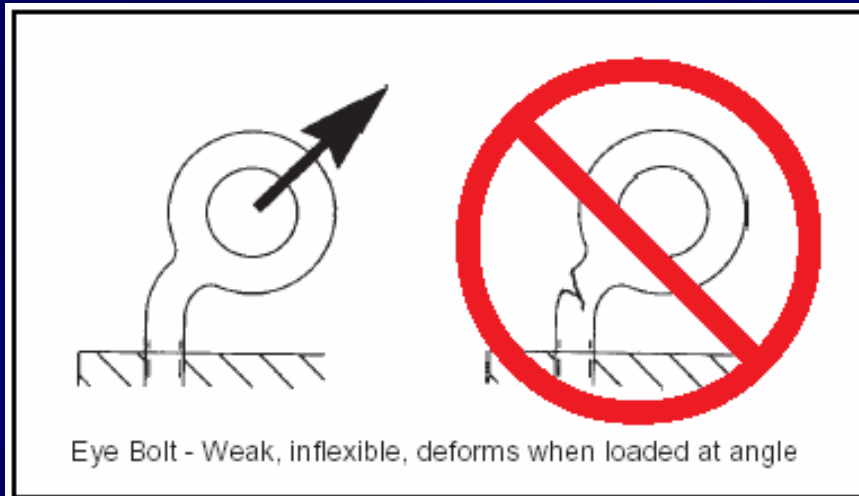


## Example

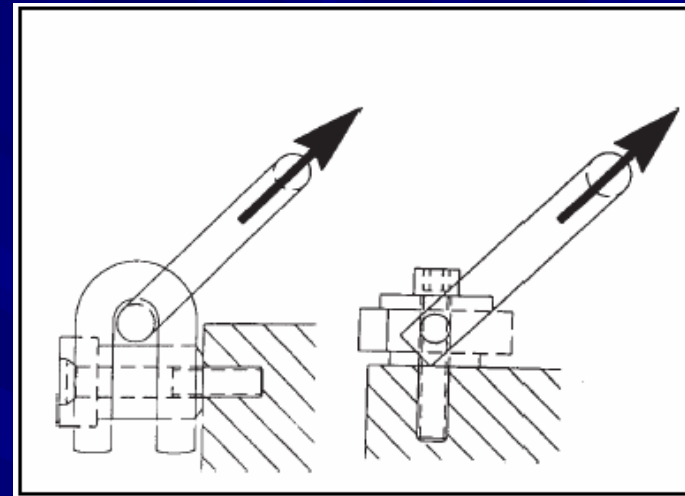
- Vertical Choker rating of each sling = 6,000lbs.
- Measured length (L) = 6 ft.
- Measured Height (H) = 4 ft.
- Reduction Factor (RF)  
=  $4(H) \div 6(L) = .667$
- Reduced sling rating in this configuration = .667
- (RF) x 6,000 lbs. = 4,000 lbs of lifting capacity per sling

Source: © Lift-All 2003

# Eye Bolts vs. Hoist Rings



Direction of Pull	Adjusted Working Load
45 degrees	30% of rated working load
90 degrees	25% of rated working load



**Side - Pull Hoist Ring**

Strong, flexible,  
allows full 360°  
swiveling and pivoting.

**Center - Pull Hoist Ring**

Designed for  
top of load mounting.  
The industry standard.

# Summary

- Proper operation and daily inspection procedures for overhead cranes.
- Proper rigging and inspection procedures for slings.
  
- A competent crane operator is :
  - ✓ Knowledgeable
  - ✓ Well trained
  - ✓ Qualified