



Cranes & Derricks
Module 8
.5 hours of instruction

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VERSION: 2019

ARIBA American Road & Transportation Builders Association

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Learning Objectives

- Identify common hazards of working around cranes
- Describe how to mitigate risks of working around cranes
- Explain crane operational responsibilities



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VIDEO

STUDY CASE: CRANE ROLLOVER

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VERSION: NOVEMBER 2017



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VERSION: 2020



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What is a Crane?

Base or chassis

- Operator controls
- Swing mechanism
- Outriggers
- Travel mechanism

Upperworks or superstructure

- Hoist mechanism
 - Jib / counter jib
 - Boom
 - Hooks
 - Weights



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VERSION: 2020



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Commonly Used Cranes

- Truck Mounted
- All Terrain
- Crawler
- Floating
- Tower



Photo: Peapix

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VERSION: 2020



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What is a Derrick?

- A-Frame
- Basket
- Breast
- Chicago boom
- Gin Pole
- Guy
- Stiffleg and Shearleg
- Oil derricks



Photo: Peapix

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VERSION: 2020



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OSHA Cranes & Derricks

[1926 Subpart CC Cranes & Derricks](#)

- Assembly & disassembly
- Powerlines
- Inspections
- Operation
- Signals
- Fall protection
- Operator certification
- Hand signals



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VERSION: 2020



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Discussion: Crane Hazards

Activity instructions: Ask the group, "What are the hazards of working around cranes?"

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VIDEO: OSHA

STUDY CASE: CAUGHT IN OR BETWEEN A CRANE

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VERSION: NOVEMBER 2017



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VERSION: 2018



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Video Presentation

A crane accident on the Bay Bridge 2012



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Assembly, Disassembly & Moving

Qualified Person

- Designs safety procedures

Competent Person

- Oversees safety procedures



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Crane Operation: Site Owner/Prime

- Report soil and ground conditions
- Identify hazards
- Verify operator credentials
- Organize lift teams



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Crane Operation: Crane Owner/Sub

- Inspect ground conditions
- Assemble & disassemble
- Transport
- Inspection
- Trained operators
- Posting documentation



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VERSION: 2010



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Crane Operation: Operator

- Valid certification
- Interpret lift charts
- Hand signals
- Lift team
- Adjust for weather and wind



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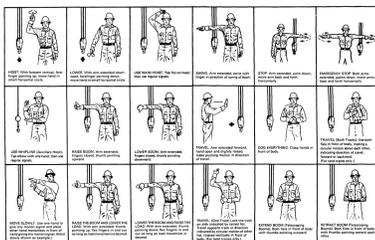
VERSION: 2010



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Activity: Hand Signals for Cranes

Activity instructions:
In your group, practice demonstrating hand signals.



Graphic: American Society of Engineers

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VERSION: 2010



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VIDEO: OSHA

STUDY CASE: CRANES AND POWER LINES

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VERSION: NOVEMBER 2017



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VERSION: 2020



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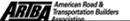
Summary

- Identify common hazards of working around cranes & derricks.
- Describe how to mitigate risks of working around cranes.
- Explain crane operational responsibilities.



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Break

Questions?

Poll

We Will continue in
minutes



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