

Articulating Boom Crane

ASMT-ARTIC01

Updated October 2025

Focus Statement

The Articulating Boom Crane Operator Certification is aligned with OSHA 29 CFR 1926 Subpart CC and ASME B30 standards, measures whether candidates demonstrate the minimum competence necessary to operate an articulating boom crane safely and effectively in construction environments. A certified operator will:

- **Regulatory Compliance and Safety Awareness:** Demonstrate working knowledge of OSHA/ASME standards, employer responsibilities, and operator duties. Apply general safety principles to prevent hazards related to ground conditions, weather, power lines, and personnel exposure.
- **Crane Setup and Operational Readiness:** Conduct pre-operational inspections, equipment setup, and assembly in accordance with manufacturer guidance and site conditions. Verify the function of operational aids, safety devices, and load charts
- **Operational Proficiency:** Accurately interpret and apply load chart data to determine safe rated capacities under varying configurations. Safely execute crane movements including travel, lifting, booming, and load positioning while accounting for net and gross capacities.
- **Rigging and Communication:** Verify load and rigging weights and rigging hardware to ensure compliance with OSHA 29 CFR 1926 Subpart CC. Demonstrate clear communication using standardized hand and voice signals to coordinate with ground personnel.
- **Demonstrate Basic Crane Knowledge:** Understand crane components, configurations, and setup procedures, including boom assembly and stability considerations.
- **Inspection, Maintenance, and Emergency Response:** Identify inspection intervals, testing requirements, and maintenance needs for ropes, hooks, and crane components. Respond effectively to equipment malfunctions, powerline contact, or site emergencies following OSHA/ASME protocols.

Performance Level Expectation

A minimally competent operator possesses the foundational knowledge, interpretive skills, and decision-making ability to prevent accidents, maintain regulatory compliance, and safely complete lifting operations. Performance at this level confirms readiness for real-world crane operations under supervision-free conditions.

Overview

- Three-hour closed-book examination
- May use a basic function, non-printing calculator
- No extra papers, books, notes or study materials are allowed.
- The following load charts below will be measured in this assessment (as available item content allows):
 - Hiab X-Duo 288
 - PM 150

The minimum passing score is 80

Practical Examination

A corresponding hands-on Practical Examination is available and required to earn a certified credential.

Assessment Development

All questions are developed and approved by subject matter experts under the direction of NCCER.

Credentials

Upon successful completion of the certification requirements, credentials can be viewed and printed by the individual or assessment program through their NCCER Account.

Score Report

Each candidate will have online access through their NCCER Account to their assessment results including their overall score and pass or training recommended status.

Articulating Boom Crane

ASMT-ARTIC01

Updated October 2025

Written Assessment Contents:

Content Domains/Topic Areas	Percent of Test
General Knowledge and Safety	11%
<i>Regulatory Standards</i>	
<i>General Safety Procedures</i>	
Crane Set-up and Assembly	11%
<i>Assembly of Crane</i>	
<i>Site Prep/Conditions</i>	
<i>Operational Components</i>	
<i>Control Systems</i>	
Inspection, Testing, and Maintenance	5%
<i>Inspection Types</i>	
<i>Testing Procedures</i>	
<i>Rope Inspection/Maintenance and Crane Maintenance</i>	
Crane Operations	36%
<i>Crane Function Controls</i>	
<i>Load Handling</i>	
<i>Travel Procedures</i>	
<i>Load Charts</i>	
<i>Net Capacity</i>	
<i>Gross Capacity</i>	
Emergency Response	5%
Standard Signals	15%
Safety Devices and Operational Aids	5%
Verify Load and Rigging Weights	12%

Total Number of Items

60