CCO

CANDIDATE HANDBOOK

- **ARTICULATING CRANE OPERATOR**
  - **Articulating Boom Cranes (ABC)**
  - **Articulating Boom Cranes with Winch (ABW)**
  - **Articulating Boom Loaders (ABL)**

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Certification Policies

ARTICULATING CRANE OPERATOR

ELIGIBILITY

To be eligible for certification, candidates must:

- Be at least 18 years of age
- Comply with CCO's Substance Abuse Policy
- Comply with the CCO Code of Ethics
- Pass written examination
- Pass practical examination(s)

CERTIFICATION EXAM OPTIONS

The following Articulating Crane Operator designations are available:

If you are seeking certification for:	Take the corresponding exams:	
	Written	Practical
Articulating Boom Cranes (ABC)	Articulating Boom Crane	Articulating Boom Crane
Articulating Boom Cranes w/ Winch (ABC & ABW)	Articulating Boom Crane w/ Winch	Articulating Boom Crane
Articulating Boom Loaders (ABL)	Articulating Boom Loader	Articulating Boom Loader
Articulating Boom Cranes and Boom Loaders (ABC & ABL)	Articulating Boom Crane	Articulating Boom Crane & Articulating Boom Loader
Articulating Boom Cranes w/ Winch and Boom Loaders (ABC, ABW, & ABL)	Articulating Boom Crane w/ Winch	Articulating Boom Crane & Articulating Boom Loader

These crane categories apply whether the crane is mounted to a truck or a crawler chassis.

EXAMINATION FEES

For all exam and related fees, visit www.nccco.org/fees.

CCO CERTIFICATION TIME FRAMES

Candidates have 12 months after they pass their first exam to pass the corresponding exam(s) for the same designation(s).

Any tests passed within a 12-month period count towards certification. For example, a candidate who passes the Articulating Boom Loader written exam in December 2024 has until the end of December 2025 to take and pass the Articulating Boom Loader practical exam.

If a certified Articulating Crane Operator subsequently becomes certified in an additional Articulating Crane designation by taking the appropriate written and practical exams, the certification period for the additional designation expires at the same time as their original certification (i.e., all Articulating Crane Operator designations expire on the same date, regardless of when in the five-year certification period the candidate passed them). If the new Articulating Crane designation is added within the final 24 months of their certification period, the certificant is exempt from recertifying for the new designation after five years; after that, however, certificants must recertify for all designations during the 12 months prior to their certifications' expiration date. This ensures that all the certificant's Articulating Crane Operator designations maintain the same expiration date.

RECERTIFICATION REQUIREMENTS

CCO Articulating Crane Operator certification is valid for five years. ***Recertification candidates must complete all requirements during the 12 months prior to their certification's expiration date.*** Regardless of the date of the exams within that one-year period, the new five-year certification period begins from the date of expiration of the candidate's initial certification.

Recertificants must:

- Pass the applicable written examination
- Comply with CCO's Substance Abuse Policy
- Comply with CCO's Code of Ethics

Candidates who can attest to at least 1,000 hours crane-related experience during their period of certification do not need to take the practical exam to recertify. *Crane-related experience* is defined as: operating, maintaining, inspecting, or training on cranes. Candidates who need to take the practical exam for any reason, however, must do so before their certification expires. ***There is no grace period after the date of expiration.*** Candidates whose certification has lapsed must take both the regular written and practical examinations to be certified again.

Recertification Exam Options

If you are seeking recertification for:	Take the corresponding written exam:
Articulating Boom Cranes (ABC)	Articulating Boom Crane
Articulating Boom Cranes w/ Winch (ABC & ABW)	Articulating Boom Crane w/ Winch
Articulating Boom Loaders (ABL)	Articulating Boom Loader
Articulating Boom Cranes and Boom Loaders (ABC & ABL)	Articulating Boom Crane
Articulating Boom Cranes w/ Winch and Boom Loaders (ABC, ABW, & ABL)	Articulating Boom Crane w/ Winch

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Written Examination Outline

ARTICULATING CRANE OPERATOR

Candidates are given 90 minutes to complete each of the written examinations ***(calculators permitted)***:

- Articulating Boom Crane (ABC)—65 questions
- Articulating Boom Crane w/Winch (ABW)—75 questions
- Articulating Boom Loader (ABL)—50 questions

APPROXIMATE PERCENTAGE OF WRITTEN EXAM BY DOMAIN

DOMAIN	ARTICULATING BOOM CRANE	ARTICULATING BOOM CRANE w/WINCH	ARTICULATING BOOM LOADER
Domain 1: Site and Setup	17%	13%	20%
Domain 2: Operations	37%	35%	40%
Domain 3: Technical Knowledge	30%	35%	28%
Domain 4: Manufacturers' Load Charts	17%	17%	12%

DOMAIN 1: SITE AND SETUP

1. Know the ability of the supporting surface to handle the expected loads; elements of concern include but are not limited to:
   a. Weakness below the surface, such as voids, tanks, and loose fill
   b. Weakness on the surface, such as retaining walls, slopes, excavations, and depressions
2. Know the proper use of blocking or cribbing.
3. Know electric power line hazards, corresponding regulations, and safety practices.
4. Know how to identify and evaluate hazards associated with:
   a. Entering and leaving the job site
   b. Site hazards such as above ground and underground utilities
   c. Transportation clearances
   d. Job site personnel
5. Know how to review lift requirements with site supervisor.
6. Know the responsibilities of various workplace personnel.
7. Know how to establish/re-establish a safety zone.
8. Know how to properly use stabilizers.
9. Know how to deploy and stow boom(s).
10. Know the proper use of wheel chocks.

DOMAIN 2: OPERATIONS

1. Know which federal regulations and industry standards affect safe operation of cranes.
2. Know how to conduct daily inspections and notify supervision of unsafe conditions.
3. Know proper operation of power take-off (PTO).
4. Know how to lift, rotate, and place the load smoothly and safely.
5. Know standard articulating boom crane hand signals.
6. Know how to secure the crane when leaving the controls:
   a. In normal conditions
   b. In emergency conditions
   c. With load suspended
7. Know how to operate in:
   a. Various weather conditions
   b. Various environmental conditions
8. Know how to determine the radius.
9. Know how to operate a permanently attached material-handling fork, including:
   a. Clamping
   b. Load control
   c. Centering the load
10. Understand the function of an overload protection (OLP) system.

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11. Know the proper procedures for operating safely under the following conditions:
    a. Operations when power lines are present
    b. Handling loads out of the operator's vision (operating in the blind)
12. Know the proper procedures for load control.
13. Know the effects of dynamic loading from:
    a. Wind
    b. Stopping and starting
    c. Impact loading
    d. Moving the load
14. Know the effect of side loading.
15. Know proper procedures for securing the crane for transit.
16. Know how to verify the weight of:
    a. Load
    b. Attachments

The following knowledge areas apply to Articulating Boom Crane (ABC) and/or Winch (ABW) ONLY.

17. Know basic rigging procedures.

The following knowledge areas apply to Winch (ABW) ONLY.

18. Know proper procedures of reeving wire ropes and selecting the proper downhaul weight.
19. Understand two block–damage prevention feature.

DOMAIN 3: TECHNICAL KNOWLEDGE

1. Know basic crane terminology and definitions.
2. Know the functions and limitations of attachments.
3. Know the significance, use, and limitations of operator warning, safety, and/or limiting devices.
4. Know the requirements of pre-operational inspections and maintenance.
5. Know how to use manufacturer-approved attachments and their effect on the crane's operation.

The following knowledge areas apply to Articulating Boom Crane (ABC) and/or Winch (ABW) ONLY.

6. Know rigging devices and their use, such as:
    a. Slings
    b. Wire rope fittings (e.g., clips, shackles)
    c. Saddles (softeners)

The following knowledge areas apply to Winch (ABW) ONLY.

7. Know wire rope:
    a. Construction and breaking strength
    b. Inspection procedures
    c. Replacement criteria and procedures
    d. Capacity and when multi-part rope is needed
    e. Maintenance and lubrication
    f. Relationship between line pull and safe working load

DOMAIN 4: LOAD CHARTS

1. Know the terminology necessary to use load charts.
2. Know how to ensure that the load chart is the appropriate chart for the machine in its particular configuration.
3. Know how to verify weight of load.
4. Know how to use load rating charts, including:
    a. The operational limitations of load charts and footnotes
    b. How to apply various load rating charts for the crane's working areas
    c. What is included in load rating charts

The following knowledge areas apply to Articulating Boom Crane (ABC) and/or Winch (ABW) ONLY.

5. Know how to make deductions for rigging, attachments, and manual boom extensions.

The following knowledge areas apply to Winch (ABW) ONLY.

6. Know where to find and how to use:
    a. The *parts of line* information
    b. The safe working load of hoist line

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Practical Examination
ARTICULATING CRANE OPERATOR

SKILLS TESTED

CCO Articulating Crane Operator Practical Examinations are available on two crane types:

- Articulating Boom Crane
- Articulating Boom Loader

Candidates may take the practical examination on one or both of the crane types. The practical examinations are comprised of four main tasks that increase progressively in the skill level tested. Skills tested include booming, swinging, articulating, telescoping, and combination (multifunction) operations.

So as to standardize testing conditions for all candidates wherever and whenever they may test, CCO has developed a standard Test Site Layout (CAD) for each of the crane types.

All electronic operator control assistance software and systems will be turned off for the duration of the test.

CANDIDATE INFORMATION AND INSTRUCTIONS

The following sections describe the specific tasks you will be performing when taking the practical examination. It is important that you understand these instructions. If there is anything you do not understand, please request clarification from the Practical Exam Proctor.

TASKS

The Articulating Boom Crane practical exam tasks are:

- ***Task 1: Pre-Operational (Shift) Inspection***
- ***Task 2: Place Test Weight in Zigzag Start Circle***
- ***Task 3: Negotiate Zigzag Corridor (Forward)***
- ***Task 4: Negotiate Zigzag Corridor (Reverse)***
- ***Task 5: Place Test Weight in Pole Circle***
- ***Task 6: Safe Shutdown and Securing Procedures***

The Articulating Boom Loader practical exam tasks are:

- ***Task 1: Pre-Operational (Shift) Inspection***
- ***Task 2: Place Test Weight in Corral***
- ***Task 3: Blind Pick***
- ***Task 4: Negotiate Zigzag Corridor***
- ***Task 5: Place Test Weight on Truck Bed***
- ***Task 6: Safe Shutdown and Securing Procedures***

There are also Pre-Test Briefing and Pre-Test Familiarization periods. Candidates are required to complete all phases of the test in sequence.

You must report to the test site at the scheduled time. ***All candidates shall comply with test site requirements concerning personal protective equipment, which at a minimum shall meet OSHA requirements.***

The Test Site Coordinator is responsible for setting the testing schedule. If you are familiar with the operation of the test crane, you may elect to test first to allow other candidates time to review the operator's manuals and load charts. Otherwise, selection shall be by random drawing or by assignment of the Test Site Coordinator.

During the practical examination, you are under the direction of the Proctor and must follow the Proctor's directions at all times. Once you have completed all of the tests you are taking, you must leave the testing area. Only personnel involved in the administration of the test are allowed in the test area.

OPTIMUM TIMES

For some tasks ***optimum time*** have been set. If the task is completed within this time period, you receive no time penalty. Other tasks are untimed, as noted below.

Once you exceed this time limit, however, you will lose points on a gradual basis. The optimum time for each task is stated as part of the task descriptions. At one-and-a-half times the optimum time the Proctor may end the task and move on to the next task.

PRE-TEST BRIEFING

While you are waiting to take your test, you will have sufficient time to read a description of the tasks to be performed and review the operator's manual and load chart for the crane(s) you will operate. In addition, you will be informed of the make and model of the crane and the weight of the test weight. You will also watch a short presentation showing all the tasks you will be required to perform during the examination.

Note that:

- The crane has been set up and leveled; a spirit level is available if you wish to verify levelness.
- No part of the course has been placed at a radius that exceeds the crane's rated capacity.

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- All hand signals used throughout the test will be in accordance with the *CCO Articulating Crane Reference Manual*.

CIRCUMVENTING THE COURSE

Circumventing the course on CCO Articulating Crane Practical Exams is defined as when:

1. Chain leaves the corridor while on or off the ground and passes more than one pole left still standing on the original string line before re-entering the corridor; you ***must*** enter the circles from inside the corridor to avoid this being marked as a deficiency
2. Chain leapfrogs from one leg of corridor to another with the chain off the ground, outside the corridor
3. Chain passes four or more poles consecutively with the chain off the ground, inside the corridor
4. Test weight and chain enters or exits the corridor without vertically clearing the hurdle (i.e., by going around the hurdle)

UNSAFE ACT

If, at any time during the Pre-Test Familiarization Period or during the test, you commit an unsafe act, you will be disqualified from continuing with the test. An "unsafe act" is defined as an action by a candidate that is uncontrolled or reckless, and is sufficient to cause safety concern for persons or property damage.

The Proctor has the authority to stop the test at any time for reasons of safety. Please ask the Proctor if you have any questions. If you are disqualified due to an unsafe act, you will not be permitted to take any additional practical exams that day.

WEATHER CONDITIONS AND EQUIPMENT PROBLEMS

The Proctor will use an anemometer to check the wind speed and then will record the weather conditions on the score sheet.

The Proctor has the responsibility to determine if weather conditions or equipment problems are such that a test needs to be suspended. If the test is interrupted due to weather conditions or equipment problems, the procedure for restarting is as follows:

- You will resume the test at the beginning of the task you were performing at the time of the interruption.
- You will be entitled to a Pre-Test Familiarization period before resuming the test.
- If testing resumes on a different machine, you must start the test over from the beginning. The first score sheet will be marked as "VOID" with an explanation and returned to CCO.
- If the testing is delayed to a different day, the test must be restarted from the beginning.

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Practical Examination Outline

ARTICULATING BOOM CRANE

CRANE WALK AROUND

- Before you begin operations, you are allowed a couple of minutes to walk around the crane to ensure proper setup.

TASK 1: PRE-OPERATIONAL (SHIFT) INSPECTION

- The Practical Exam Proctor will identify five items regarding the crane that are part of the pre-operational inspection. One at a time, you will describe how you would conduct the inspection and what deficiencies you would look for.
- You have approximately one minute per item.

PRE-TEST FAMILIARIZATION PERIOD

- You will be allowed 10 minutes to familiarize yourself with the crane and to examine anything on the crane that you feel is necessary to operate it comfortably.
- You are allowed to get the feel of the controls and are permitted to run the crane through its functions.
- You may not interfere with the test course, lift the test weight, or shadow the Zigzag Corridor.
- You must finish the Pre-Test Familiarization Period with the boom tip centered over the test weight within the 10-minute period.
- You will be notified when there are five and one minute(s) remaining.
- If you are ready in less than 10 minutes, you may indicate this to the Proctor.
- If, at the end of the Pre-Test Familiarization Period, you feel you are not ready to take the examination, you should notify the Proctor. You will have, in effect, disqualified yourself from taking the examination at this time, and you will be required to sign to that effect on the *Candidate Score Sheet*.

Remote Operators: At no time during the Familiarization Period or test should you walk into any part of the course, nor should you walk or stand underneath the test weight or boom.

TASK 2: PLACE TEST WEIGHT IN ZIGZAG START CIRCLE

Optimum time: 1:30

- At the Proctor's indication to start, at which point timing will begin, lift the test weight from Designated Area 1 and bring it to Designated Area 2. Avoid touching the ground, truck, or Zigzag Corridor with the test weight or chain.
- Place the test weight and chain inside Designated Area 2.
- Timing will stop when the test weight and chain have been placed within Designated Area 2 and the Proctor has given you a *stop* signal. If you do not receive a *stop* signal, this indicates that the test weight or chain is not within the outside perimeter of the Designated Area, and the task continues to be timed.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Knocking balls off poles
  b. Knocking poles over
  c. Test weight or chain touching ground, truck, or Zigzag Corridor
  d. Exceeding the optimum time

TASK 3: NEGOTIATE ZIGZAG CORRIDOR (FORWARD)

Optimum time: 3:30

- At the Proctor's indication to start, at which point timing will begin, lift the test weight from Designated Area 2 and guide it through the Zigzag Corridor. Avoid touching the ground or truck with the test weight, and avoid touching or knocking over any part of the PVC pole barriers.
- Keep the chain on the ground until any part of the chain has touched or crossed the denotation line located 4 ft. before the hurdle.
- Raise the test weight and chain over the hurdle without touching or knocking it over.
- Place the test weight and chain inside Designated Area 3.
- Timing stops when the test weight has been placed within Designated Area 3 and the Proctor has given you a *stop* signal. If you do not receive a *stop* signal, this indicates the test weight or chain is not within the outside perimeter of the Designated Area, and the task continues to be timed.

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- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Knocking balls off poles
  b. Moving pole bases off line
  c. Knocking poles over
  d. Knocking down hurdle
  e. Chain leaving ground before denotation line
  f. Passing poles with chain off ground
  g. Test weight touching ground or truck
  h. Chain touching ground outside Designated Area 3
  i. Exceeding optimum time

TASK 4: NEGOTIATE ZIGZAG CORRIDOR (REVERSE)

Optimum time: 3:30

- At Proctor's indication to start, at which point timing will begin, lift the test weight from Designated Area 3 and over the hurdle.
- Once the hurdle is cleared, lower the test weight so that the chain touches the ground before reaching the denotation line. Guide it through the Zigzag Corridor in reverse, keeping the chain on the ground. Avoid touching the ground or truck with the test weight, and avoid touching or knocking over any part of the PVC pole barriers.
- Place the test weight inside of Designated Area 2.
- Timing stops when the test weight has been placed within Designated Area 2 and the Proctor has given you a *stop* signal. If you do not receive a *stop* signal, this indicates that the test weight is not within the outside perimeter of the Designated Area, and the task continues to be timed.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Chain initially contacting ground after denotation line
  a. Knocking balls off poles
  b. Moving pole bases off line
  c. Knocking poles over
  d. Knocking down hurdle
  e. Chain leaving ground after denotation line
  f. Passing poles with chain off ground
  g. Test weight touching ground or truck
  h. Exceeding optimum time

TASK 5: PLACE TEST WEIGHT IN POLE CIRCLE

Optimum time: 1:30

- At the Proctor's indication to start, at which point timing will begin, lift the test weight from Designated Area 2 and place it inside Designated Area 1. Avoid touching the ground, truck, or Zigzag Corridor with the test weight or chain, and avoid touching or knocking over any part of the PVC pole barriers surrounding Designated Area 1.
- Timing stops when the test weight has been placed within Designated Area 1 and the Proctor has given you a *stop* signal. If you do not receive a *stop* signal, this indicates that the test weight or chain is not within the outside perimeter of the Designated Area, and the task continues to be timed.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Knocking ball off pole
  b. Knocking pole over
  c. Test weight or chain touching ground, truck, or Zigzag Corridor
  d. Exceeding optimum time

Make sure to deactivate the remote control (if using one) and ensure all controls are in neutral before leaving the test area.

TASK 6: SAFE SHUTDOWN AND SECURING PROCEDURES

- Before leaving the operator station, you will be required to apply safe shutdown procedures to the crane in preparation for the next candidate.
- Once the crane is shut down, you will leave the operator station and describe to the Proctor the procedures you would follow to secure the crane at the end of the work day.

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Practical Examination Outline

ARTICULATING BOOM LOADER

CRANE WALK AROUND

- Before you begin operations, you are allowed a couple of minutes to walk around the crane to ensure proper setup.

TASK 1: PRE-OPERATIONAL (SHIFT) INSPECTION

- The Practical Exam Proctor will identify five items regarding the crane that are part of the pre-operational inspection. One at a time, you will describe how you would conduct the inspection and what deficiencies you would look for.
- You have approximately one minute per item.

PRE-TEST FAMILIARIZATION PERIOD

- You will be allowed 15 minutes to familiarize yourself with the crane and to examine anything on the crane that you feel is necessary to operate it comfortably.
- You are allowed to get the feel of the controls and are permitted to run the crane through its functions.
- You may not interfere with the test course, lift the test weight, or shadow the zigzag corridor.
- You must finish the Pre-Test Familiarization Period with the forks fully closed with the forks facing the truck and the chain touching the ground inside Designated Area 5 within the 15-minute period.
- You will be notified when there are ten, five, and one minute(s) remaining.
- If you are ready in less than 15 minutes, you may indicate this to the Proctor.
- If, at the end of the Pre-Test Familiarization Period, you feel you are not ready to take the examination, you should notify the Proctor. You will have, in effect, disqualified yourself from taking the examination at this time, and you will be required to sign to that effect on the candidate score sheet.

Remote Operators: At no time during the Familiarization Period or Test should you walk into any part of the course or walk underneath the test weight or boom.

TASK 2: PLACE TEST WEIGHT IN CORRAL

Optimum time: 4:50

- At the Proctor's indication to start, at which point timing begins, raise the forks out of Designated Area 4. Lift the test weight from Designated Area 1 and fully close the fork assembly.
- Guide the test weight and place it inside Designated Area 2 with the fork body on the side marked "A," and remove the forks. All four corners of the test weight must be placed within the designated area.
- Whether or not you are able to place all four corners within the designated area, timing will continue until you place at least 3 out of 4 corners of the test weight within the designated area. The Proctor will give you a *stop* signal once the forks are completely clear of the test weight and the weight is within the designated area.
- Avoid touching anything but the designated area.
- If you exceed one-and-half times the optimum time (7:15 total), the test will end and you will not be permitted to continue.
- Points will be deducted for the following:
  a. Knocking balls off poles
  b. Moving pole bases off line
  c. Knocking poles over
  d. Test weight touching the ground or truck outside of the Designated Areas
  e. Test weight left outside of Designated Area 2 at end of task
  f. Fork assembly not properly closed
  g. Exceeding optimum time

TASK 3: BLIND PICK

Optimum time: 3:20

- At the Proctor's indication to start, at which point timing begins, raise the test weight from the blind side (marked "B"), and fully close the fork assembly.
- Guide the test weight to Designated Area 3, and lower it until the chain is touching the ground inside Designated Area 3.
- Timing stops when the chain is touching the ground within Designated Area 3 and you have been given the *stop* signal. If you do not receive a *stop* signal, that means that the chain is not within the outside perimeter of the designated area, and the task continues to be timed.

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- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.

Points will be deducted for the following:

a. Test weight or fork assembly touching ground, truck, or zigzag corridor after chain has left the ground
b. Chain touching ground outside of the designated area
c. Fork assembly not properly closed
d. Exceeding optimum time

TASK 4: NEGOTIATE ZIGZAG CORRIDOR

Optimum time: 3:30

- At the Proctor's indication to start, at which point timing will begin, guide the test weight from Designated Area 3 through the zigzag corridor. Keep the chain on the ground until the chain has touched or crossed the denotation line located 6 ft. before the hurdle.
- Raise the test weight over the hurdle. Once the hurdle is cleared, lower the load until chain touches ground inside the designated area.
- Timing stops when the chain is touching the ground within Designated Area 4 and you have been given the *stop* signal. If you do not receive a *stop* signal, this indicates that the test weight chain is not within the outside perimeter of the Designated Area, and the task continues to be timed.
- If your time exceeds one-and-a-half times the optimum time, the Proctor may stop you and move on to the next task.
- Points will be deducted for the following:
  a. Knocking balls off poles
  b. Moving pole bases off line
  c. Knocking poles over
  d. Knocking down hurdle
  e. Chain leaving ground before denotation line
  f. Passing poles with chain off ground
  g. Test weight or fork assembly touching ground or truck
  h. Chain touching ground outside of Designated Area 4
  i. Exceeding optimum time

TASK 5: PLACE TEST WEIGHT IN DESIGNATED AREA 1

Optimum time: 3:30

- At the Proctor's indication to start, at which point timing begins, lift the test weight from Designated Area 4 and bring it over to Designated Area 1. Avoid touching the ground, truck, or any part of the zigzag corridor.
- Place the test weight inside Designated Area 1. All four corners of the test weight must be placed within the designated area.
- Once the weight has been placed inside Designated Area 1 and the forks have been removed, I will give you a signal to proceed back to Designated Area 4.
- Timing will end when the forks are fully closed with the forks facing the truck and the chain is touching the ground inside Designated Area 4 and I have given you a stop signal. If you do not receive a stop signal, this indicates that the fork assembly has not been properly positioned and the chain is not within Designated Area 4, and the task continues to be timed.
- If your time exceeds one and half times the optimum time, I may stop you and move on to the next task.
- Do you understand these instructions?
- Points will be deducted for the following:
  a. Any part of the test weight or fork assembly touching the ground or zigzag corridor
  b. Chain touching ground outside of designated area
  c. Poles knocked over
  d. Pole bases moved off-line
  e. Balls knocked off pole
  f. Test weight left outside of Designated Area 1 at end of task
  g. Exceeding optimum time

Make sure to deactivate the remote control (if using one) and ensure all controls are in neutral before leaving the test area.

TASK 6: SAFE SHUTDOWN AND SECURING PROCEDURES

- Before leaving the operator station, you will be required to apply safe shutdown procedures to the crane in preparation for the next candidate.
- Once the crane is shut down, you will leave the operator station and describe to the Proctor the procedures you would follow to secure the crane at the end of the work day.

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Reference List
ARTICULATING CRANE OPERATOR

The most recent versions of the following reference materi-als are used by CCO's Articulating Crane Management Committee to verify the accuracy of CCO test questions. Candidates are strongly advised to become familiar with manufacturer's load charts in preparing for the CCO certification examinations.

ASME B30.22 Articulating Boom Cranes (2023)

www.asme.org

CCO Articulating Crane Reference Manual

Download a free PDF from:

www.nccco.org/ACOstudymaterials

OSHA 29 CFR 1926 Subpart CC—Cranes and Derricks in Construction

www.osha.gov/laws-regs/regulations/standardnumber/1926

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CCO Policies

ARTICULATING CRANE OPERATOR

Code of Ethics

www.nccco.org/coe

Disciplinary Policy

www.nccco.org/discipline

Substance Abuse Policy

www.nccco.org/abuse

Testing Accommodations

www.nccco.org/accommodations

Test Security

www.nccco.org/security

Information Release Policy

www.nccco.org/inforelease

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