

NATIONAL COMMISSION FOR THE CERTIFICATION OF CRANE OPERATORS



Articulating Crane Operator Certification Program

Program Highlights

For more information about the Articulating Crane Operator Certification Program, contact:

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Introduction

PROGRAM DESCRIPTION

The National Commission for the Certification of Crane Operators (NCCCO) is an independent not-for-profit organization formed to establish and administer a nationwide program of certification for crane operators. The purpose of NCCCO is to set standards for measuring the knowledge and proficiency required for the safe operation of cranes. Based on extensive discussions with representatives from all segments of business and industry who recognize the impact of construction safety issues, NCCCO has identified the following potential benefits of operator certification:

- Reduced risk of loss
- Fewer accidents, injuries and fatalities
- Assurance of operator's abilities
- Less property damage
- Improved safety records
- Enhanced public image of crane operators

All candidates are required to pass both the Written and Practical Examination(s) in order to be certified. Candidates wishing to take the Practical Examination should contact their Test Site Coordinator.

The initial certification period is for five (5) years, after which an operator is required to recertify. Periodic Written Examination is necessary to ensure that certificants' knowledge of industry standards, equipment, and safety practices keeps pace with changes in these areas. NCCCO's subject matter experts, working in conjunction with psychometric consultants, reviewed the speed of such change in the industry and researched other comparable certification/licensing programs before determining that this goal could be achieved by setting the examination interval at five years; little, if any, additional benefit is believed, would accrue by more frequent testing. A Practical (skills) Examination is not required for recertification providing the certificant meets experience and medical (physical) requirements.

DEVELOPMENT OF THE NCCCO EXAMINATIONS

The first step in the development of an objective test to measure the knowledge of safe crane operations was a job analysis study. The study identified the knowledge necessary for safe crane operations. Subject matter experts were consulted to generate test blueprints and content specifications.

Development of the **Written Examinations** involved a panel of crane operation content experts who worked with the staff of International Assessment Institute to write and review all questions used in the examination. Each examination contains a unique combination of questions from the item bank. These questions are selected for the examination on the basis of the content areas as defined by the test blueprints.

The NCCCO **Practical Examinations** were developed as a fair and objective assessment of the essential skills a crane operator needs in order to safely operate articulating cranes.

They were developed over a one-year period by a NCCCO Task Force staffed by experts from all aspects of the crane industry—crane operators, training directors, managers, safety supervisors, manufacturers—representing many thousands of hours of crane operating experience.

NCCCO teamed their knowledge and experience with the exam development expertise of International Assessment Institute who guided the NCCCO Task Force in establishing key elements of the program, including: identifying essential skills, selecting tasks, standardizing test conditions, developing the scoring process, establishing reliability between tests, and creating flexible application and scheduling procedures.

In concert with the NCCCO Task Force, International Assessment Institute also designed the Practical Examiner Accreditation Program whereby NCCCO trains and accredits NCCCO-certified crane operators to administer NCCCO Practical Examinations.

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Certification Policies

ELIGIBILITY

Requirements for certification include the following:

- Be at least 18 years of age
- Meet Medical Requirements
- Comply with NCCCO's Substance Abuse Policy
- Pass Written Examination
- Pass Practical Examination(s)
- Comply with the Code of Ethics

PHYSICAL EVALUATION

Certified crane operators must continue to meet ASME B30 physical requirements throughout their certification period and attest to their agreement to this requirement in their application.

Means of compliance with ASME Physical Requirements include, but are not limited to, the following:

- NCCCO Physical Examination Form (Valid for three [3] years)
- A current DOT (Department of Transportation) Medical Examiner's Certificate (Valid for two [2] years)

NCCCO WRITTEN EXAMINATIONS

The Written Examination program consists of three (3) examinations. Candidates will choose one (1) of those based on the certification designation they seek.

The possible Written Examinations are:

- Articulating Boom Crane
- Articulating Boom Crane w/ Winch
- Articulating Boom Loader

Candidates meeting the eligibility requirements may take the Written or Practical Examination in any order.

NCCCO PRACTICAL EXAMINATIONS

The NCCCO Practical Examination demonstrating crane operation proficiency is available in two (2) crane types:

- Articulating Boom Cranes
- Articulating Boom Loaders

A candidate must pass the Written Exam of their choice and at least one (1) corresponding Practical Exam in order to be certified for a five (5) year period.

NCCCO CERTIFICATION TIME FRAMES

Candidates have 12 months after they pass their first exam (Written or Practical) in which to take the corresponding Written or Practical Exam in the same category. Candidates may take their Written and Practical Exams in any order. For example, a candidate passing the Articulating Boom Loader Written Exam has 12 months from their exam date to pass the Articulating Boom Loader Practical Exam.

Candidates who do not take and pass both the Written and Practical Exams within the 12 month time frame will be required to start the certification process again from the beginning.

If a certified candidate subsequently becomes certified in additional specialties, the five (5) year certification period for additional specialties begins at the same time as he/she was originally certified, i.e., all designations expire on the same date regardless of when in the five (5) year certification period the candidate passed them.

CERTIFICATION EXAM OPTIONS

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

RECERTIFICATION

NCCCO certification is valid for five (5) years. Candidates must complete all of their recertification requirements during the 12 months prior to their expiration date. This includes:

- Passing the Written Recertification Examinations
- Continuing to meet Medical Requirements
- Compliance with NCCCO's Substance Abuse Policy
- Compliance with Code of Ethics

There is no “grace period” after the date of expiration. Candidates whose certification has lapsed must take the regular Written and Practical Examinations over again in order to be recertified.

All candidates are allowed two (2) attempts to pass the Recertification Exams before their certification expires. Candidates who are unsuccessful after two (2) attempts must take and pass the regular Exams.

Certified candidates may take their Written Recertification Examinations up to one (1) year prior to their date of expiration. Regardless of the date of the Recertification Examination within that one (1) year period, the new five (5) year certification period begins from the date of expiration of the candidate’s initial certification.

[Note: Candidates who recertify more than 12 months prior to their expiration date will have their new certification period begin immediately, not from the end of their current certification period.]

Recertification Exams are available at regularly scheduled test administrations. Candidates wishing to recertify should contact the Test Site Coordinator who set up the initial certification. Candidates whose employment circumstances have changed should ask their new employer to schedule a test administration. Candidates who are not certified in all designations may add a new designation at the same time as they take their Recertification Examinations by taking the full examination in that designation.

For more information about recertification, please contact NCCCO’s Recertification Department at 703-560-2391, or via e-mail at: info@NCCCO.org.

CODE OF ETHICS FOR CERTIFIED CRANE OPERATORS

NCCCO Operators must comply with the NCCCO’s Code of Ethics during their certification as illustrated below:

As a NCCCO Certified Crane Operator, I will perform my work in a manner:

- (i) free of bias with regard to religion, ethnicity, gender, age, national origin and disability.
- (ii) so as to place the safety and welfare of workers associated with the lifting operation above all other considerations.
- (iii) so as to protect nearby general public property and the environment.

In addition, I will:

- (iv) make my management aware if I have safety concerns relating to the lifting operations which I am performing.
- (v) not knowingly violate safety related regulations, warnings or instructions set forth by OSHA, recognized safety standards, or the crane manufacturer.
- (vi) not misrepresent or knowingly deceive others concerning my experience or the capabilities of myself or the crane I am operating.
- (vii) not misrepresent or misuse my certification card or the NCCCO logo, which are the property of NCCCO, and I understand that I must return the card to NCCCO immediately if required to do so.

DISCIPLINARY POLICY

NCCCO'S Ethics and Discipline Committee is responsible for establishing and implementing standards of conduct, such as ethical standards, policies and procedures for disciplinary action.

Grounds for revocation of certification status shall include, but not be limited to, the following:

1. Period of certification exceeded without renewal.
2. Evidence of falsification of any information on any documents submitted to NCCCO or its agents.
3. Evidence of non-compliance with NCCCO's Substance Abuse Policy.
4. Evidence of culpability in an accident during certification period.
5. Evidence of non-compliance with ASME B30 medical requirements.
6. Evidence of non-compliance with the Code of Ethics.

Certified Operators, who wish to appeal a decision regarding revocation of their operator status, must do so in writing, stating the grounds for the appeal. This should be addressed to:

Executive Director

National Commission for the Certification of
Crane Operators (NCCCO)
2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031

NCCCO has established policies and procedures to fairly and consistently address alleged violations of the Code of Ethics. The complaints procedures have been designed to ensure that only valid and actionable complaints are investigated and considered, and that all parties involved in the complaint have an opportunity to document circumstances warranting the complaint, and to respond to the complaint.

NCCCO has a two-tier process to ensure that issues regarding the practice and conduct of certified crane operators are fairly and reasonably investigated and determined, and that the public is protected against unprofessional and unethical conduct by certificants.

Complaints against certificants are initially investigated by NCCCO's Manager of Test Integrity who reports to NCCCO's Ethics and Discipline Committee. If the complaint is considered actionable, the Ethics and Discipline Committee informs both the certificant and the complainant of the official opening of the investigation. Following the investigation of the complaint, the Ethics and Discipline Committee informs the certificant and the complainant of its decision.

If a sanction is imposed, the certificant may request an appeal of the decision to the NCCCO Board of Directors. The decision of the NCCCO Board of Directors is final.

SUBSTANCE ABUSE POLICY

It is the policy of NCCCO that crane operators shall not use a prescribed or over the counter substance which would impair their ability to operate cranes safely. This includes illegal drugs, controlled substances (including trace amounts), look-alike drugs, designer drugs, or any other substance, which may have an effect on the human body of being a narcotic, depressant, stimulant or hallucinogen.

An exception to this rule is that an operator may use such a substance or drug if it is prescribed by a licensed medical practitioner, who is familiar with the operator's medical history and all assigned duties, and who has advised the operator the prescribed substance will not adversely affect the operator's ability to safely operate a crane.

NCCCO certified crane operators shall comply with the substance abuse testing provisions of ASME B30. It is a condition of certification that crane operators certified by NCCCO attest to their compliance with this Substance Abuse Policy. Non-compliance with this policy automatically revokes a candidate's certification status.

CERTIFICATION CARDS

Certified operators receive a plastic photo ID card at no cost when they certify for the first time and when they complete the requirements for recertification.

Replacement cards, cards showing certification in an additional specialty, or revision of cards for candidates who retake and pass a specialty they previously failed, may be obtained from International Assessment Institute at a cost of \$25.

CHANGE OF ADDRESS

If you change your address you must notify NCCCO as soon as possible. Failure to do so may cause you to miss important updates on the NCCCO program that could affect your certification.

Changes of address should be sent in writing via letter or fax to International Assessment Institute (IAI). A change of address form is provided in this handbook.



Written Examination Outline

DOMAIN	ARTICULATING BOOM CRANE	ARTICULATING BOOM CRANE W/ WINCH	ARTICULATING BOOM LOADER
	Approx. % of Exam	Approx. % of Exam	Approx. % of Exam
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) jobsite personnel.
5. Know how to review lift requirements with site supervisor.
6. Know the responsibilities of various work place 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
10. Know the proper use of wheel chocks.

DOMAIN 2: OPERATIONS

1. Know which federal regulations and industry standards affect safe operation of the 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 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 function of Over-Load Protection (OLP) system.
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 crane for transit.

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

16. Know how to verify the weight of:
 - (a) load,
 - (b) attachments,
 - (c) rigging.
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 the 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; such as clips, shackles,
 - (c) saddles (softeners).

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

7. Know wire rope:
 - (a) construction and breaking strength, inspection procedures,
 - (b) replacement criteria and procedures,
 - (c) capacity and when multi-part rope is needed,
 - (d) maintenance and lubrication, 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.



Sample Questions

The following are sample test questions typical of the style and content of the questions used in the NCCCO Written Certification Examinations. Additional sample questions can be found at the NCCCO's website, www.NCCCO.org.

1. The numbers shown on the crane's load chart are
 - (a) net capacity.
 - (b) gross capacity.
 - (c) deducted capacity.
 - (d) structural capacity.
2. If no load chart is available for the type of lift to be performed, you should
 - (a) perform the lift with caution.
 - (b) only lift 50% of rated capacity.
 - (c) not perform the lift at all.
 - (d) use a load chart for a similar lift.
3. Whenever the stabilizers are not visible to the operator during extending or setting, the operator must
 - (a) exercise extreme caution.
 - (b) be assisted by a signalperson.
 - (c) extend or retract the stabilizers no faster than half speed.
 - (d) ensure no other personnel are in the immediate vicinity.
4. The load radius is the horizontal distance from the
 - (a) centerline of the crane's rotation to the centerline of the hook pin.
 - (b) center of the crane to the center of gravity of the load.
 - (c) center of the truck to the center of the load.
 - (d) tipping axis to the centerline hook pin.
5. What do the letters OLP stand for as they relate to articulated cranes?
 - (a) Operator's Lifting Performance
 - (b) Over-loading Percentages
 - (c) Operating Load Parameters
 - (d) Over-load Protection
6. When is it acceptable to load an articulating crane beyond the rated load?
 - (a) If the lifting attachment is rated for the load.
 - (b) Only while operating for load test purposes.
 - (c) When approved by the site supervisor.
 - (d) If deployment of extensions is not required for lift.

Question #	6
B	5
D	4
A	3
B	2
C	1
B	

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Practical Exam Outline

The following is an outline of the practical testing procedure, as provided to candidates at the time of testing.

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 Examiner.

TASKS

The Four (4) Articulating Boom Crane Tasks are:

- Task 1: Place Test Weight in Zigzag Start Circle
- Task 2: Navigate Zigzag Corridor (Forward)
- Task 3: Navigate Zigzag Corridor (Reverse)
- Task 4: Return Test Weight to Pole Circle

The Four (4) Articulating Boom Loader Tasks are:

- Task 1: Place Test Weight in Designated Area 2
- Task 2: Blind Pick Up / Place Test Weight in Zigzag Start Area
- Task 3: Negotiate Zigzag Corridor
- Task 4: Place Test Weight on Truck Bed.

There is also a Pre-Test Briefing, a Pre-Test Familiarization Period. You will be required to complete all phases of the test in sequence.

Candidates must report to the test site at the scheduled time. All candidates shall comply with test site requirements concerning personal protective equipment, which requirements 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 Examiner and must follow the Examiner'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.

TIME LIMITS

For all tasks, an "optimum" time limit has been set. If the task is completed within this time period, you receive no time penalty.

Once you exceed this time limit, you will lose points on a gradual basis. If you take one and a half times as long as the optimum time, you will have lost all the points allotted to that particular task. The "optimum" time for each task is stated as part of the task descriptions.

PRE-TEST BRIEFING

While you are waiting to take your test you will have sufficient time to read this 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, the boom length, and the weight of the Test Weight. You will also watch a short candidate video or PowerPoint 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 level.
- None of the target points have been placed at a radius that exceeds the crane's rated capacity.
- All hand signals used throughout the test will be in accordance with ASME B30.22.

CIRCUMVENTING THE COURSE

“Circumventing the course” on the NCCCO Articulating Crane Practical Exam is defined as when the Test-Weight:

- leaves the **Zigzag Corridor** and passes more than one pole without touching them before re-entering the corridor.
- “leapfrogs” from one leg of the **Zigzag Corridor** to another with the chain off the ground.
- passes more than four (4) poles consecutively with the chain off the ground, inside or outside of the corridor.

The Examiner has the authority to stop the exam at anytime if he/she feels that the candidate is attempting to circumvent any task.

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” includes, but is not limited to:

- uncontrolled or reckless operation.
- failure to respond to a ‘stop’ signal.
- the Test Weight touching any part of the candidate’s body during the exam.
- walking underneath the Test Weight while operating the crane with a remote control.

The Examiner has the authority to stop the test at any time for reasons of safety. Please ask the Examiner if you have any questions.

If you are disqualified due to an unsafe act, your case will be reviewed by IAI and NCCCO, and you will be notified as to your eligibility for rescheduling your practical test.

CANDIDATE ID AND SIGNATURE

Prior to beginning the examination, the Examiner will ask you for a government issued photo identification such as a driver’s license.

The Examiner will ask if you have read the Candidate Information and Instructions and will answer any questions you may have. He will review with you the weather conditions and ask you to sign indicating you understand the instructions for the test, and agree with the Examiner’s assessment of the weather conditions.

WEATHER CONDITIONS AND EQUIPMENT PROBLEMS

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

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

- You will resume the test at the beginning of the task you were performing at the time of the interruption.
- You will also be entitled to a Pre-Test Familiarization period before resuming the test.
- If you resume the test on a different machine, you will have the option of starting the entire test over from the beginning.
- If the testing is delayed to a different day, the test must be restarted from the beginning.



Practical Exam Outline

Articulating Boom Crane

PRE-TEST FAMILIARIZATION PERIOD

- You will be allowed 10 minutes to familiarize yourself with the crane and to examine anything on the crane which 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. The brakes and other devices have been set according to the crane manufacturer’s recommendations.
- 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 all booms retracted, and the boom tip under control over the Test Weight within the 10 minute period.
- You will be notified when there are five (5) and one (1) minute(s) remaining.
- If you are ready in less than 10 minutes, you may indicate this to the Examiner.
- If at the end of the Pre-Test Familiarization Period, you feel you are not ready to take the examination, you should notify the Examiner. 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 1: PLACE TEST WEIGHT IN ZIGZAG START CIRCLE

Optimum Time: 1 minute, 30 seconds

- At the Examiner’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 (Start of Zigzag Corridor).
- Place the Test Weight inside Designated Area 2.
- Timing will stop when you have placed the Test Weight on the ground inside Designated Area 2 and the Examiner has given you a stop signal. If you do not receive a stop signal, this will indicate that the Test Weight is not within the outside perimeter of the Designated Area, and the task continues to be timed.

- Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - Test Weight or chain touching any part of the ground, truck, or Zigzag Corridor outside of Designated Area 2
 - Exceeding the *optimum time*

TASK 2: NEGOTIATE ZIGZAG CORRIDOR (FORWARD)

Optimum Time: 3 minutes, 20 seconds

- At the Examiner’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.
- Keep the chain on the ground until any portion of the chain has touched or crossed the denotation line located four (4) ft. before the hurdle.
- Raise the Test Weight and chain over the hurdle, and place them into Designated Area 3 (End of Zigzag Corridor).
- Timing will stop when you have placed the Test Weight and chain on the ground inside Designated Area 3 and the Examiner has given you a stop signal. If you do not receive a stop signal, this will indicate the Test Weight or chain is not within the outside perimeter of the Designated Area and the task continues to be timed.
- Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - Knocking down hurdle
 - Chain leaving ground before the denotation line
 - Passing poles with chain off ground
 - Test Weight touching ground or truck
 - Exceeding *optimum time*

TASK 3: NEGOTIATE ZIGZAG CORRIDOR (REVERSE)

Optimum Time: 3 minutes, 20 seconds

- At Examiner's indication to start (at which point timing will begin) lift the Test Weight from Designated Area 3 and over the hurdle.
- Once the obstruction is cleared, lower the weight so that the chain touches the ground before reaching the denotation line. Then travel through the Zigzag Corridor in reverse, keeping the chain on the ground.
- Place the Weight inside of Designated Area 2.
- Timing will stop when the Test Weight has been placed on the ground inside Designated Area 2 and the Examiner has given you a stop signal. If you do not receive a stop signal, this will indicate that the Test Weight is not within the outside perimeter of the Designated Area, and the task continues to be timed.
- Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - Knocking down hurdle
 - Chain leaving ground after passing the denotation line
 - Passing poles with chain off ground
 - Test Weight touching ground or truck
 - Exceeding *optimum time*

TASK 4: PLACE TEST WEIGHT IN DESIGNATED AREA 1

Optimum Time: 1 minute, 30 seconds

- At the Examiner's indication to start (at which point timing will begin) lift the Test Weight from Designated Area 2 and place the Test Weight and chain into Designated Area 1.
- Timing will stop when the Test Weight has been placed in Designated Area 1 and the Examiner has given you a stop signal. If you do not receive a stop signal, this will indicate that the Test Weight or chain is not within the outside perimeter of the Designated Area, and the task continues to be timed.

- Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - The Test Weight or chain touching any part of the ground truck or Zigzag Corridor, outside of Designated Area 1
 - 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.

POST TEST PROCEDURES

Once you have completed the Practical Examination:

- The Examiner will record your performance.
- The Examiner is not permitted to review your score sheet or discuss your performance on the test.
- Exam results will be mailed to you within approximately twelve (12) working days of International Assessment Institute's receipt of the score sheet.
- For tests on any other cranes you have made formal application to test on, return to the candidate briefing area.
- If you have completed all of your tests, you must leave the test site.



Practical Exam Outline

Articulating Boom Loaders

PRE-TEST FAMILIARIZATION PERIOD

- You will be allowed 15 minutes to familiarize yourself with the crane and to examine anything on the crane which 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. The brakes and other devices have been set according to the crane manufacturer’s recommendations.
- 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 fork assembly stowed in the cradle within the 15 minute period.
- You will be notified when there are 10, five (5), and one (1) minute(s) remaining.
- If you are ready in less than 15 minutes, you may indicate this to the Examiner.
- If at the end of the Pre-Test Familiarization Period, you feel you are not ready to take the examination, you should notify the Examiner. 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 1: PLACE TEST WEIGHT IN DESIGNATED AREA 2

Optimum Time: 4 minutes

- At the indication to start, at which point timing will begin for this task, lift the fork out of the fork boom rest (cradle). Pick up the Test Weight from Designated Area 1, and then fully close the fork assembly.
- Lift the Test Weight, and then place it on the ground inside Designated Area 2, with the fork body on the near side (marked A).
- Remove the forks from the Test Weight.
- Timing will end when the Test Weight has been placed inside Designated Area 2, and the forks are completely clear of the Test Weight.

- Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - Fork Assembly not properly closed
 - Any part of the Test Weight touching the ground or truck outside of the designated area, after the chain has left the truck bed
 - Test Weight left outside of Designated Area
 - Exceeding *optimum time*

TASK 2: BLIND PICK / PLACE TEST WEIGHT IN ZIGZAG START AREA

Optimum Time: 3 minutes

- At my indication to start, at which point timing will begin for this task, pick up the Test Weight from the blind side (marked B) and fully close the fork assembly.
- Move the Test Weight to Designated Area 3, and lower it until the chain is touching the ground inside the Designated Area.
- **For remote operators only:** *You will be required to remain in the Operator Designated Area until the Test Weight is lifted and the fork assembly is fully closed.*
- Timing will end when the Test Weight chain has been placed inside Designated Area 3. If you do not receive a stop signal, this will indicate that the Test Weight chain is not within the Designated Area, and the task continues to be timed.
- Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - Fork Assembly not properly closed
 - Test Weight, Fork Assembly, or chain touching the ground, truck, or Zigzag Corridor or outside the Designated Area after the chain has left the ground.
 - Chain touching ground outside the Designated Area after the chain has left the ground.
 - Exceeding *optimum time*

TASK 3: NEGOTIATE ZIGZAG CORRIDOR

Optimum Time: 4 minutes

- At the Examiner's indication to start (at which point timing will begin) guide the Test Weight from Designated Area 2 through the Zigzag Corridor, to Designated Area 3 (End of Zigzag Corridor).
 - Keep the chain on the ground until any portion of the chain has touched or crossed the denotation line located six (6) ft. before the hurdle. Raise the Test Weight over hurdle. Once the hurdle has been cleared, lower the load until chain touches ground in the Designated Area.
 - Timing will end when the Test Weight chain has been placed within Designated Area 3, and you have been given the stop signal. If you do not receive a stop signal, this will indicate that the Test Weight chain is not within the outside perimeter of the Designated Area, and the task continues to be timed.
 - Points will be deducted for the following:
 - Knocking ball off pole
 - Moving pole base off line
 - Knocking pole over
 - Knocking down hurdle
 - Chain leaving ground before denotation line
 - Passing poles with chain off ground
 - Test Weight touching ground
 - Exceeding *optimum time*
- Points will be deducted for the following:
 - Test Weight or Fork Assembly touching the ground, truck, or Zigzag Corridor outside the Designated Area after the chain has left the ground
 - Test Weight left outside of the Designated Area
 - Boom and Fork Assembly not properly stowed
 - Exceeding *optimum time*

TASK 4: PLACE LOAD ON TRUCK BED

Optimum Time: 3 minutes

- At the Examiner's indication to start (at which point timing will begin) lift the Test Weight from Designated Area 3, and guide it over to Designated Area 1.
- Place the Test Weight inside Designated Area 1.
- Return the fork assembly into the boom fork rest (cradle).
- Timing will end when the Test Weight has been placed inside the Designated Area, the Fork Assembly has been returned to the fork rest, and the Examiner has given you a stop signal. If you do not receive a stop signal, this will indicate that the Fork Assembly has not yet been properly returned to its cradle.