



**NATIONAL COMMISSION FOR THE
CERTIFICATION OF CRANE OPERATORS (CCO)**

CANDIDATE HANDBOOK

- **RIGGER LEVEL I**
- **RIGGER LEVEL II**

®



This CCO certification program is accredited by the ANSI National Accreditation Board (ANAB) to ISO 17024 (General Requirements for Bodies Operating Certification Systems of Persons).



**ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17024
PERSONNEL CERTIFICATION
BODY**

Mobile, Tower, Overhead,
Articulating, and Service Truck Crane
Operator, Digger Derrick Operator,
Signalperson, Rigger Level I and
Level II, Crane Inspector, and Lift
Director Programs Accredited

This handbook reflects CCO's current policies at the time of publication; to be sure that you have the latest version of this book, see the Handbooks and Forms page on the CCO website. Please read this handbook carefully and retain it for reference throughout the certification process.

Do not discard this document.

CCO does not discriminate against any individual because of race, gender, age, creed, disability, or national origin.

Dear CCO Rigger Certification Candidate:

Welcome to the National Commission for the Certification of Crane Operators (CCO) national rigger certification program.

CCO is a nonprofit organization founded in 1995 to establish a fair and independent evaluation of crane operator knowledge and skills. Key to this industry-led effort has been the development and administration of the CCO written and practical examinations that lead to CCO certifications. As personnel responsibilities in the lifting industry have become better defined, CCO has developed additional certification programs for related occupations, including riggers and signalpersons.

This nationally recognized rigger certification program is the culmination of three years' hard work by experts from the varied industries and groups that use rigging, including construction, steel erection, iron workers, the operating engineers, utilities, petrochemicals, specialty rigging companies, and rigging hardware and sling manufactures. CCO task forces were made up of experts from all aspects of the rigging industry—riggers, training directors, managers, supervisors, manufacturers—who together represent many thousands of hours of rigging experience. These volunteers gave freely of their time and expertise with the goal of improving the safety of all whose work brings them into contact with rigging equipment.

To ensure CCO examinations are—and remain—valid measurements of proficiency, CCO teamed the task force's knowledge and experience with its exam development expertise. In addition to guiding the development of new examinations, CCO continually analyzes the performance of CCO exams and reports to the Exam Management Committees. To be able to provide fair and independent assessments, CCO does not conduct training, nor does it provide training materials.

When created, the rigger certification was voluntary unless required by local jurisdictions or specific employers. However, in November 2010 the federal Occupational Safety and Health Administration (OSHA) enacted new national regulations for cranes and derricks used in construction under 29 CFR 1926 Subpart CC, which state that riggers need to be qualified. CCO certification can help document that an individual is qualified.

CCO, as a third-party certification body, is fully committed to, and understands the importance of, delivering all certification activities on a foundation of impartiality. All policies and procedures are established in an objective manner and ultimately strive to achieve fairness throughout all activities. CCO prevents any conflicts of interest through detailed policies and procedures observed by staff, governing body representatives and those involved in written and practical exam administration.

This candidate handbook has been prepared to provide candidates with comprehensive information about the CCO written and practical examinations leading to Rigger Level I and Rigger Level II certifications. CCO recognizes the commitment required to become certified and will do everything it can to make each candidate's experience a positive and successful one. If after reading this handbook there is anything unclear, candidates may call CCO at 703-560-2391 or email candidate@nccco.org. CCO staff will guide the candidate through any aspect of the program that he/she would like explained in more detail.

Thank you for your interest—and good luck on your efforts to become CCO-certified!



Table of Contents

Introduction	1
Program Description	1
CCO Examination Development	1
Definition of a Rigger	1
Certified Rigger Level I	1
Certified Rigger Level II	2
Certification Policies	3
Eligibility	3
Certified Rigger Level I Exams	3
Certified Rigger Level II Exams	3
Certification Time Frames	3
Recertification	3
Adding Rigger Level II to Existing Rigger Level I Certification	4
Code of Ethics for Certified Riggers	4
Disciplinary Policy	4
Substance Abuse Policy	4
Certification Cards	5
Change of Address	5
How to Apply for CCO Exams	6
Start with myCCO Portal	6
Written Examination Options	6
Rescheduling/Cancellation	7
Identification at the Test Site	7
Score Reporting	8
Practical Examination Options	8
Applying for Practical Exam	8
Written Examination Process	9
Candidates Requesting Testing Accommodations	9
Test Site Information	9
Test Scoring Information	9
Retaking the Examination(s)	10
Information Release Policy	10
Written Examination Outline—Rigger Level I	11
Domain: Scope of the Rigging Activity	11
Domain: Technical Knowledge	11
Domain: Inspection	11
Domain: Execution of Rigging Activity	11

Written Examination Outline—Rigger Level II	13
Domain: Scope of the Rigging Activity.....	13
Domain: Planning the Rigging Activity	13
Domain: Selection of Rigging Components.....	13
Domain: Technical Knowledge	14
Domain: Inspection.....	14
Domain: Execution of Rigging Activity.....	14
Reference List	15
Practical Examination Process	16
Eligibility.....	16
Skills Tested	16
Scheduling a Test	16
Interruption/Restarting	16
Practical Scoring.....	16
Practical Score Reporting.....	16
Practical Exam Candidate Fees	16
Practical Exam Scoring Review Requests.....	16
Practical Examination Outline—Rigger Level I.....	18
Tasks.....	18
Pre-Test Briefing	18
Task 1: Pre-Use Rigging Inspection.....	18
Task 2: Rigging Hitches.....	18
Task 3: Rigging Connections.....	18
Task 4: Basic Knots	19
Scoring Considerations.....	19
Practical Examination Outline—Rigger Level II.....	20
Tasks.....	20
Unsafe Acts.....	20
Pre-Test Briefing	20
Candidate ID and Signature	20
Task 1: Level Lift	20
Task 2: Rigging Frame Rotation	21
Scoring Considerations.....	21



Introduction

RIGGER

PROGRAM DESCRIPTION

The purpose of CCO's rigger certification program is to set standards for measuring the knowledge and proficiency required for safe rigging practices. Based on extensive discussions with representatives from all segments of business and industry who recognize the impact of safety issues, CCO has identified the following potential benefits of rigger certification:

- Fewer accidents, injuries, and fatalities
- Reduced risk of loss
- Less property damage
- Improved safety records
- Enhanced public image of riggers

Candidates are permitted to schedule and take both the Level I and Level II written and practical exams at the same time; however, for Rigger Level II certification to be valid, Rigger Level I certification must also be current.

The initial certification period is for five years. To maintain their certification, certificants are required to recertify prior to their expiration date. Periodic written examination is necessary to ensure that certificants' knowledge of industry standards, equipment, and safety practices keeps pace with changes in these areas. CCO's subject matter experts, working in conjunction with psychometric consultants, reviewed the speed of such change in the industry and researched other comparable certification and licensing programs before determining that this goal could be achieved by setting the examination interval at five years. Little, if any, additional benefit, it is believed, would accrue by more frequent testing. A practical (skills) examination is not required for recertification, as long as the certificant meets specified experience requirements.

CCO EXAMINATION DEVELOPMENT

The first step in the development of an objective test to measure the knowledge required for safe rigging operations was a job analysis study. This study identified the knowledge, skills, and abilities necessary for safe rigging operations. A representative number of subject matter experts (SMEs) then validated that the knowledge, skills, and abilities recommended by the experts was vital to safe operations. The job analysis study and validation survey were then used to generate the test blueprints and content specifications.

Development of the CCO Rigger written examinations involved a panel of SMEs who worked with CCO staff to write and review all questions used in the examinations. Each examination contains a unique combination of questions from the question bank. These questions are selected for the examinations on the basis of the content areas, as defined by the test blueprints.

The CCO Rigger Practical Examinations were developed as fair and objective assessments of the essential duties riggers need to perform for safe rigging operations.

These exams were developed over a three-year period by CCO task forces made up of experts from all aspects of the rigging industry—specialty riggers, ironworkers, training directors, managers, supervisors, manufacturers—who together represent many thousands of hours of rigging experience. These task forces teamed their knowledge and experience with CCO's exam-development expertise. CCO guided the task force in establishing key elements of the program, including identifying essential skills, selecting tasks, standardizing test conditions, developing the scoring process, establishing reliability among tests, and creating flexible application and scheduling procedures.

In concert with the Rigger task forces, CCO staff also designed the Practical Exam Proctor Program (PEPP), whereby CCO trains and credentials CCO-certified riggers to administer CCO Rigger practical examinations.

DEFINITION OF A RIGGER

A certified *rigger* is a person who has been trained and certified to handle and move loads. The level of certification depends upon the individual's training, knowledge, skill base, and ability to perform functions related to the selection, inspection, and proper use of rigging equipment.

This person may be qualified in a craft or trade and carry an occupational title such as iron worker, electrician, carpenter, millwright, mechanic, laborer, mason, long-shoreman, lineman, pipe fitter, boilermaker, and the like. (The persons described in the categories above will be referred to as *rigger* even though they carry another occupational title.)

CERTIFIED RIGGER LEVEL I

CCO identified the following job duties for Rigger Level I certification. They can perform simple, repetitive rigging tasks when the load weight, center of gravity, the rigging, and rigging configuration are provided or known by the

rigger through experience or on-the-job training prior to the rigging activities. Specifically, Level I Riggers should be able to demonstrate or have knowledge of how to:

- Inspect rigging before use
- Identify, select, and attach rigging with basic knowledge of hitch configurations, capacities, and basic knots
- Recognize associated hazards
- Use various types of rigging equipment and basic hitches and their applications

CERTIFIED RIGGER LEVEL II

In addition to knowing and demonstrating Rigger Level I knowledge and skills, a certified Rigger Level II can select rigging components and procedures based on rigging capacity. A Level II Riggers can perform the following rigging tasks unsupervised:

- Estimate weight and center of gravity when calculations are required
- Identify lift points
- Determine and select rigging based on loading
- Perform pre-use inspection of rigging and lift points
- Identify, select, and attach rigging with knowledge of hitch configurations and load angle factors, rigging capacities, and load integrity
- Understand load dynamics and associated hazards

As applicable, Level II Riggers will also have a working knowledge of hoisting equipment, winches, jacks, industrial rollers, and similar equipment.



Certification Policies

RIGGER LEVEL I & RIGGER LEVEL II

ELIGIBILITY

To be eligible for certification, candidates must:

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

CERTIFIED RIGGER LEVEL I EXAMS

Written Examination

The Certified Rigger Level I Written Examination consists of 60 multiple-choice questions. Candidates are allowed 60 minutes to complete the test.

Practical Examination

The successful completion of an CCO Certified Rigger Level I Practical Examination demonstrates a candidate's basic rigging competency.

CERTIFIED RIGGER LEVEL II EXAMS

Written Examination

The Certified Rigger Level II Written Examination consists of 50 multiple-choice questions. Candidates are allowed 60 minutes to complete the test.

Practical Examination

The successful completion of an CCO Certified Rigger Level II Practical Examination demonstrates a candidate's competency in rigging a load for a level lift and for rotating a load.

CERTIFICATION TIME FRAMES

Candidates must pass both Written and Practical Examinations to be certified for a five-year period. The Written and Practical Exams may be taken in either order. Candidates have 12 months from the time they pass their first Written or Practical Exam for each rigger level in which to pass the corresponding (Written or Practical) Exam.

Any tests passed within a 12-month period count towards certification. For example, a candidate who fails the Rigger Level I Written Exam in January 2022 but passes the Rigger Level I Practical Exam in June 2022 has until the end of June 2023 to retake (and pass) the Rigger Level I Written Exam.

If a certified rigger subsequently becomes certified in an additional rigger or signalperson designation by taking the appropriate written and practical exams, the certification period for the additional designation expires at the same time his/her original certification (i.e., all rigger and signalperson designations expire on the same date, regardless of when in the five-year certification period the candidate passed them). If the new designation is added within the final 24 months of his/her 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 of the certificant's rigger and signalperson designations maintain the same expiration date.

Candidates for certification or recertification may petition for an extension of CCO's standard timeline(s). CCO staff shall have the discretion to make the initial determination of whether a requested extension should be granted. Petitions for an extension of time are generally denied absent a showing of extraordinary circumstances. Denials of such petitions may be appealed to the Appeals Committee.

RECERTIFICATION

CCO certification is valid for five years. Candidates must complete all of their recertification requirements during the 12 months prior to their certification's expiration date. This includes:

- Passing the applicable Rigger Written Examination
- Compliance with CCO's Substance Abuse Policy
- Compliance with the Code of Ethics

Recertification candidates take the same written exam as those certifying initially.

There is no grace period after certification has expired. Candidates whose certification has lapsed must take the full written **and** practical examinations to be certified again.

NOTE: Rigger Level II certificants must only take and pass the Rigger Level II written exam to maintain both Rigger Level I and Rigger Level II certifications. If a Rigger Level II recertification candidate fails the written exam twice, he/she is required to take the Rigger Level I and Rigger Level II written exams again to maintain certification.

There is no requirement for a practical examination for recertification.

Certified candidates may take their Rigger written examination up to one year prior to their certification's date of expiration. Regardless of the date of the recertification examination within that one-year period, the new five-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.]

ADDING RIGGER LEVEL II TO EXISTING RIGGER LEVEL I CERTIFICATION

Rigger Level I certificants are encouraged to "step up" to Rigger Level II when they feel they are ready for the more challenging exams. Rigger Level II can be added at any time; however, if a Rigger Level I certificant is in the final year of certification, the certificant may take the Rigger Level II written exam in place of the Rigger Level I written exam. In order to achieve full Rigger Level II certification, the candidate must pass the practical exam within 12 months of passing the Rigger Level II written exam. Candidates stepping up to Rigger Level II are encouraged to take the Rigger Level II written and practical exams at the same time or to take the Rigger Level II practical exam first.

CODE OF ETHICS FOR CERTIFIED RIGGERS

CCO-certified Riggers must comply with CCO's Code of Ethics during their certification, as follows:

In my occupation, I will conduct myself in a manner:

- i. *So as to place the safety and welfare of others associated with my work above all other considerations;*
- ii. *So as to protect and preserve nearby general public property and the environment; and*
- iii. *So as to be free of bias with regard to religion, ethnicity, gender, age, national origin, and disability.*

Furthermore, in connection with my work and in my dealings with CCO, I will:

- iv. *Make management and appropriate personnel aware promptly if I have any safety concerns relating to the work that I am performing or with which I am involved;*
- v. *Not knowingly violate any safety-related regulations, warnings, or instructions set forth by OSHA, recognized safety standards, prevailing jurisdictions, or equipment manufacturers; and,*

- vi. *Not mislead, misrepresent or knowingly deceive others concerning my experience or the capabilities of myself or the equipment I am operating or with which I am working.*

In addition, in my dealings with CCO, I will:

- vii. *Provide accurate and complete information and abide by CCO's policies and procedures, including this Code of Ethics, as they may be updated from time to time;*
- viii. *Not act dishonestly or unfairly in order to gain an advantage, or to provide another with an advantage, in connection with any dealings with CCO;*
- ix. *Cooperate fully and completely with any administrative inquiries or investigations by CCO; and,*
- x. *Not misrepresent or misuse any CCO card, or the NCCCO or CCO acronyms and logos, or any registered trademark or other intellectual property of CCO; and I understand that I must return the card to CCO immediately if required to do so.*

CCO-certified personnel who intentionally or knowingly violate any provision of the Code of Ethics will be subject to action by a peer review panel, the Ethics and Discipline Committee, which may result in suspension or revocation of certification.

DISCIPLINARY POLICY

All participants in CCO's certification programs, including CCO certified personnel, are held to very high standards of conduct and are expected to conduct themselves in an ethical manner.

In recognizing its responsibility to maintain the integrity of CCO's certification programs, CCO understands that action may be needed against a candidate or certificant upon receipt and investigation of allegations of violation(s) of the Code of Ethics or Substance Abuse Policy or similar policies, if they are found to be substantiated.

Find grounds for disciplinary action as well as the policies and procedures surrounding such action at www.nccco.org/discipline.

SUBSTANCE ABUSE POLICY

It is the policy of the National Commission for the Certification of Crane Operators (CCO) that certified personnel shall not perform duties related to their certification while under the influence of any substance that impairs or may reasonably be expected to impair their ability to work safely in the workplace.

See details of the CCO substance abuse policy at www.nccco.org/abuse.

CERTIFICATION CARDS

Certified riggers receive a laminated photo ID card at no cost when they certify, add a designation, or recertify.

Replacement cards may ordered online at:
www.nccco.org/newcard.

Certification cards remain the property of CCO, are not transferable, and must be returned to CCO upon demand.

CHANGE OF ADDRESS

Certificants who change their address must notify CCO as soon as possible. Failure to do so may cause important updates on CCO's programs to be missed that could affect a certificant's stature.

The fastest and easiest way to update your contact information is using the myCCO portal smartphone app, available for iPhones and Android phones. Alternatively, you may use the companion website (www.nccco.org/myCCO) to access and update your contact information and review your current certifications and expiration dates. The app also enables you to view your upcoming exams and recent exam history, including exam results.



How to Apply for CCO Exams

WRITTEN AND PRACTICAL

START WITH MYCCO PORTAL

All candidates applying for CCO exams—both written and practical—need a myCCO account to submit their exam applications and payments. A myCCO account is free and takes only minutes to set up.

To apply for CCO exams, complete the following steps:

1. Go to my.cocert.org and login or register for an account.
2. Once you are logged in, submit an online application and pay for the exam(s).
3. Application deadlines and processing times vary by type of testing. Please see specifics below.
4. Candidates have six months from the date of application to take exam(s).

Examination Fees

For all exam and related fees, visit the Exam Fees page on CCO's website at www.nccco.org/fees.

WRITTEN EXAMINATION OPTIONS

The following exam administration options are available for CCO written exams:

Online Proctored Testing (OPT)

Take your exam(s) online using your internet-connected computer. You will be monitored by a live online proctor for the full duration of the exam. You can test from almost anywhere, 24/7/365. Computers must meet minimum technical requirements as found at www.nccco.org/techreq. For more information, go to www.nccco.org/OPT.

Applications may be submitted at any time, but no less than two business days before your preferred exam date.

Once the application has been processed, candidates will receive a scheduling authorization email with specific instructions on how to schedule the date and time of their exam. Scheduling exam appointment occurs through the myCCO portal. Once scheduled, candidates will receive a CCO appointment confirmation email with the date and time of their appointment.

Candidates will receive preliminary exam results immediately following testing.

Event Online Testing (EOT)

Take your exam(s) online using a computer at an authorized CCO test site. For more information, go to www.nccco.org/EOT.

Applications may be submitted at any time, but no less than two business days before your preferred exam date.

Once the application has been processed, candidates will receive a scheduling authorization email with specific instructions on how to find an available authorized CCO test site. Scheduling your exam appointment occurs through the Test Site Coordinator. Once scheduled, candidates will receive a CCO appointment confirmation email with the date, time, and location of their appointment.

Candidates will receive preliminary exam results immediately following testing.

Computer-Based Testing (CBT)

Take your exam(s) online using a computer at any of the 400+ PSI test centers across the country. For more information about CBT, go to www.nccco.org/cbt.

Applications may be submitted at any time, but no less than five business days before your preferred exam date.

Once the application has been processed, candidates will receive a scheduling authorization email with specific instructions on how to schedule the date, time, and location their exam. Scheduling exam appointments occurs through PSI. Once scheduled, candidates will receive a CCO appointment confirmation email with the date, time, and location of their appointment.

Candidates will receive exam results immediately following testing.

Paper/Pencil Testing (PPT)

Take your exam(s) via paper/pencil on a specific date, time, and location. If interested in paper/pencil testing, go to www.nccco.org/findwritten to find a PPT exam administration convenient to you; then contact the Test Site Coordinator to confirm availability.

Paper/pencil CCO written examinations are electronically scored by CCO. For this reason, it is important to complete the answer sheet according to the instructions provided by the Written Exam Proctor on the day of the exam. Candidates will receive credit only for answers recorded on the scannable answer sheet. Answers marked in the

test booklet(s) will NOT be counted toward a candidate's score.

RESCHEDULING/CANCELLATION

The following policies apply should a candidate be unable to attend the scheduled exam appointment.

Online Proctored Testing (OPT)

- Candidates may reschedule or cancel their exam appointment at no cost through the myCCO portal at least one minute prior to the exam start time.
- Candidates who are 15 minutes late for their appointment, miss their exam appointment entirely, or do not test within six months of their application submission will forfeit their fees.
- Note that candidates who scheduled testing through OPT are able to cancel and reschedule through EOT if they so choose, at no additional cost.

Event Online Testing (EOT)

- Candidates may reschedule or cancel their exam appointment at no cost by contacting their Test Site Coordinator as long as the exam has not been started.
- Candidates who decide not to take exams, or do not test within six months of application submission will forfeit their fees.
- Note that candidates who scheduled testing through EOT are able to cancel and reschedule through OPT if they so choose, at no additional cost.

Computer-Based Testing (CBT)

- Candidates may reschedule their exam appointment at no cost through PSI as long as they do so at least 24 hours prior to the exam start time.
- To reschedule or unreschedule exams:
 - Log into PSI account, or
 - Call PSI at 833-333-4752
- Candidates who do not cancel their appointment by the deadline, miss their exam appointment, arrive late for their appointment, decide not to take exams, or do not test within six months of application submission will forfeit their fees.

Paper/Pencil Testing (PPT)

Standard Cancellation

- Candidates may cancel their application as long as they do so at least seven business days prior to the exam date.

- To cancel an application email candidate@nccco.org.
- Refunds, minus a cancellation fee, will be issued within 30 days of the cancellation.
- Candidates who miss their exam appointment, or miss the cancellation deadline will forfeit their fees.

Emergency Cancellation

Only the following are considered grounds for emergency cancellation:

- **Called to work**—supporting documentation required: letter from employer
- **Candidate illness**—supporting documentation required: doctor's note
- **Family death**—supporting documentation required: death certificate or obituary notice

To be considered for an emergency cancellation:

- Candidates must notify CCO within seven business days following the exam date.
- To cancel an application, email candidate@nccco.org along with required supporting documentation.
- Refunds, minus a cancellation fee, will be issued within 30 days of the cancellation.
- Candidates who miss their exam, decide not to take exams, or cancel after the deadline will forfeit their fees.

IDENTIFICATION AT THE TEST SITE

Candidates must bring valid (not expired) government-issued photo identification that includes date of birth to the test site on the day of the test administration. Candidates will be required to sign the test site roster upon entry to the testing area.

Acceptable forms of photo identification may include a current:

- Passport
- Government-issued driver's license
- Military identification card
- U.S. Government-issued alien registration card

NOTE: Candidates without appropriate identification documents will NOT be admitted to take the CCO examination(s) and all fees will be forfeited.

SCORE REPORTING

Online Proctored Testing (OPT) and Event Online Testing (EOT)

- Candidates will receive preliminary exam results immediately following testing.
- Candidates results will also be available in the myCCO Portal and mobile phone app.

Computer-Based Testing (CBT)

- CBT candidates will receive their test results immediately following their exams and should retain these score reports for their records.
- Candidates results will also be available in the myCCO mobile phone app.

Paper/Pencil Testing (PPT)

- Paper/pencil CCO written examinations are electronically scored by CCO. For this reason, it is important to complete the answer sheet according to the instructions provided by the Written Exam Proctor on the day of the exam. Candidates will receive credit only for answers recorded on the scannable answer sheet. Answers marked in the test booklet(s) will NOT be counted toward a candidate's score.
- Examination results are emailed to candidates approximately 12 business days after the examination administration.

PRACTICAL EXAMINATION OPTIONS

To find upcoming practical exam administrations for the program(s) you're interested in, contact your Test Site Coordinator to determine the date of the next scheduled practical exam, or visit www.nccco.org/practicalsites to find the nearest practical testing locations to you; then contact the Test Site Coordinator to confirm availability and to schedule.

Applications may be submitted at any time, but at least one hour prior to testing.

Once the application has been processed, candidates will receive an email for each exam they are approved to take with a testing authorization code. Candidates will not be permitted to take a practical exam without their authorization code.

APPLYING FOR PRACTICAL EXAM

Candidates must apply for practical exams online at my.cocert.org. Upon submission of their application, candidates will receive a confirmation email within one

hour with an authorization code for each practical exam they are approved to take. Candidates have up to six months to take their practical exam before their authorization expires.

Please note the following requirements:

- Candidates will **not** be permitted to take a practical exam without their authorization code.
- Candidates must take the authorized practical exam by the expiration date. No extensions permitted.
- Applications **cannot** be cancelled, refunded, or transferred to another candidate.
- **On test day candidates must bring a valid government-issued photo ID (passport, driver's license) with date of birth.**



Written Examination Process

RIGGER LEVEL I & RIGGER LEVEL II

CANDIDATES REQUESTING TESTING ACCOMMODATIONS

Arrangements for persons with disabilities will be provided upon request, in conformance with the Americans with Disabilities Act (ADA).

Professional documentation in support of a request for accommodation must be submitted to CCO no later than four weeks prior to the scheduled test date. For further information about testing accommodations, see the complete CCO Testing Accommodations Policy at: www.nccco.org/accommodations.

TEST SITE INFORMATION

Test Security

For the purpose of test security, candidates who sit for CCO examination(s) acknowledge that they understand the following:

- The examination is the exclusive property of CCO.
- The examination and the questions contained therein are protected by federal copyright law.
- No part of the examination(s) may be copied or reproduced in part or whole by any means whatsoever, including memorization.
- Theft or attempted theft of an examination is punishable as a felony.
- While at the examination site, candidates are considered professionals and shall be treated as such. In turn, candidates must conduct themselves in a professional manner at all times. While at the site, they shall not use words or take actions that are vulgar, obscene, libelous, or that would denigrate the staff or other candidates.
- No conversing or any other form of communication among the candidates is permitted once they enter the examination area.
- No smoking, eating, or drinking is allowed at the examination site.
- No guests, visitors, or family members are allowed in the testing room or reception areas.
- Candidate participation in any irregularity during the examination, such as giving or obtaining unauthorized information or aid, as evidenced by an observation or subsequent statistical analysis, may be sufficient cause to terminate participation, invalidate

the results of the examination, or other appropriate remedy.

- A candidate's signature on the answer sheet or roster for the administration of the examination confirms that the candidate has read and understands the above statements.

Candidate Question Comment Forms

Computer-based testing candidates may provide comments for any question by clicking on the "Comments" button to the left of the Time button. This opens a dialogue box where candidates may enter comments.

NOTE: Only comments completed on the Candidate Question Comment Form or provided during the computer-based examination at the test site will be considered for review.

TEST SCORING INFORMATION

CCO written examinations are criterion-referenced examinations; i.e., the passing score is set beforehand, and candidate performance on the examination is not compared to the performance of others taking the examination. In a criterion-referenced examination, a candidate must obtain a score equal to or higher than a predetermined passing score to pass the test. The passing score represents an absolute standard and is determined by a panel of CCO content experts using a psychometrically accepted standard-setting methodology.

In reporting the examination results to candidates, statistical procedures are used to convert raw scores (i.e., the number of test questions answered correctly) to scaled scores, which are set for all administrations of the examination(s). The scaled score is not a number-answered-correctly score.

Candidate results are reported as a pass/fail status.

Candidate scores are never reported by telephone.

Score Review Requests

Candidates not passing exam(s) may request from CCO a hand scoring of their answer sheet(s), provided their request is made in writing within three months of the test date. A Score Review Processing Fee will be invoiced.

Scoring review requests should be emailed to candidate@nccco.org.

In the event that score review of a failing candidate's answer sheet results in a passing score, the score review fee will be refunded in full.

RETAKE THE EXAMINATION(S)

Candidates who fail an examination(s) may retake the examination(s); they must reapply and pay all corresponding retest fees. Written exam retest candidates are required to wait a minimum of four weeks before retesting on the same exam.

INFORMATION RELEASE POLICY

CCO releases information pertaining to individuals who have successfully passed one or more CCO examinations according to its Information Release Policy as detailed at www.nccco.org/inforelease.



Written Examination Outline

RIGGER LEVEL I

The CCO Certified Rigger Level I Written Examination tests the following knowledge areas relating to rigging:

Domain: Scope of the Rigging Activity

- Approximately 15% of test

Domain: Technical Knowledge

- Approximately 13% of test

Domain: Inspection

- Approximately 30% of test

Domain: Execution of Rigging Activity

- Approximately 42% of test

DOMAIN: SCOPE OF THE RIGGING ACTIVITY

- Know how to identify the load's travel path
- Know how to identify load characteristics
 - Know how to verify the load weight
 - Know how to identify the attachment points
- Recognize special handling requirements
- Recognize unsafe rigging practices
 - Pinch points
 - Need for softeners
 - Load stability
 - Shock load
 - Side load
 - Body positioning
 - Electrical hazards
- Know how to identify hazards
- Know how to communicate a hazard identification

DOMAIN: TECHNICAL KNOWLEDGE

- Understand and apply ASME non-inspection standards
 - ASME B30.9: Slings
 - ASME B30.10: Hooks
 - ASME B30.20: Below-the-Hook Lifting Devices
 - ASME B30.26: Rigging Hardware

- Understand and apply OSHA non-inspection regulations
 - 1910.184: Materials Handling and Storage
 - 1926.251: Rigging Equipment for Material Handling
 - 1926.1431: Hoisting Personnel

DOMAIN: INSPECTION

- Know ASME frequent inspection standards
 - B30.9: Slings
 - B30.10: Hooks
 - B30.20: Below-the-Hook Lifting Devices
 - B30.26: Rigging Hardware
- Know OSHA frequent inspection regulations
 - 1910.184: Materials Handling and Storage
 - 1926.251: Rigging Equipment for Material Handling

DOMAIN: EXECUTION OF RIGGING ACTIVITY

- Know how to use slings
 - Chain
 - Wire rope
 - Metal mesh
 - Synthetic rope
 - Synthetic web
 - Synthetic round
- Know how to use rigging hardware
 - Shackles
 - Adjustable hardware
 - Links, rings, and swivels
 - Rigging blocks
 - Hooks
 - Hoists
 - Dollies, skates, and rollers
 - A-frames
 - Trolleys
 - Compression hardware
 - Beam clamps
 - Softeners
 - Eyebolts
 - Swivel hoist rings
 - Jacks

- Know how to use below-the-hook lifting devices
 - Structural (lifting beams)
 - Plate clamps
 - Beam and girder clamps
- Know proper use of tag lines
 - Know proper use of basic knots
- Know post-load movement activities
 - Know how to secure the load
 - Know how to disconnect the rigging
 - Know how to stow the gear



Written Examination Outline

RIGGER LEVEL II

The CCO Certified Rigger Level II written examination tests the following knowledge areas relating to rigging:

Domain: Scope of the Rigging Activity

- Approximately 15% of test

Domain: Planning the Rigging Activity

- Approximately 15% of test

Domain: Selection of Rigging Components

- Approximately 34% of test

Domain: Technical Knowledge

- Approximately 13% of test

Domain: Inspection

- Approximately 10% of test

Domain: Execution of Rigging Activity

- Approximately 13% of test

Note: The Rigger Level II Recertification Exam also includes questions from the following Rigger Level I content domains:

- Inspection
- Execution of Rigging Activity

DOMAIN: SCOPE OF THE RIGGING ACTIVITY

- Know how to identify the load to be moved
- Know how to identify the load's travel path
- Know how load is to be positioned
- Know how to identify load characteristics
 - Know how to calculate the load weight
 - Know how to determine the center of gravity
 - Know how to calculate the load dimensions
 - Know how to identify the attachment points
 - Know any special handling requirements
 - » Know the load composition
 - » Know the load's structural integrity
 - Recognize special handling requirements
- Recognize unsafe rigging practices
 - Load stability
- Knowledge necessary to identify hazards
- Knowledge necessary to communicate hazards

DOMAIN: PLANNING THE RIGGING ACTIVITY

- Know how to determine rigging equipment requirements
- Know lifting characteristics of the rigging equipment
- Know how to verify that the rigging can be removed
- Know the responsibilities of the signalperson
- Know the responsibilities of the equipment operator
- Know the responsibilities of the lift director
- Know how to calculate tensions on slings and rigging hardware

DOMAIN: SELECTION OF RIGGING COMPONENTS

- Know how to select slings
 - Chain
 - Wire rope
 - Metal mesh
 - Synthetic rope
 - Synthetic web
 - Synthetic round
- Know how to select rigging hardware
 - Shackles
 - Adjustable hardware
 - Turnbuckles
 - Chain hardware
 - Links, rings, and swivels
 - Rigging block
 - Hooks
 - How to select hoists
 - » Air
 - » Lever
 - » Electric
 - » Manual (chain falls)
 - Dollies/skates/rollers
 - A-frames
 - Trolley
 - Know how to select compression hardware
 - » Wire rope clips
 - » Wedge sockets
 - Beam clamps
 - Softeners
 - Eyebolts
 - Swivel hoist rings
 - Jacks

- Know how to identify below-the-hook lifting devices
 - Structural (lifting beams)
 - Mechanical lifting devices (including vacuum lifting devices)
 - Close proximity operated lifting magnets
 - Remotely operated lifting magnets
 - Scrap and material handling grapples
 - Plate clamps
 - Beam/girder clamps

DOMAIN: TECHNICAL KNOWLEDGE

- Understand and apply ASME non-inspection standards
 - ASME B30.5: Mobile and Locomotive Cranes
 - ASME B30.9: Slings
 - ASME B30.10: Hooks
 - ASME B30.20: Below-the-Hook Lifting Devices
 - ASME B30.26: Rigging Hardware
- Understand and apply OSHA non-inspection regulations
 - 1910.184: Materials Handling and Storage
 - 1926.251: Rigging Equipment for Material Handling
 - 1926.1431: Hoisting Personnel

DOMAIN: INSPECTION

- Know ASME periodic inspection standards
 - B30.9: Slings
 - B30.10: Hooks
 - B30.20: Below-the-Hook Lifting Devices
 - B30.26: Rigging Hardware
- Know OSHA periodic inspection regulations
 - 1910.184: Materials Handling and Storage
 - 1926.251: Rigging Equipment for Material Handling

DOMAIN: EXECUTION OF RIGGING ACTIVITY

- Know how to use slings
 - Chain
 - Wire rope
 - Metal mesh
 - Synthetic rope
 - Synthetic web
 - Synthetic round

- Know how to use rigging hardware
 - Shackles
 - Adjustable hardware
 - » Turnbuckles
 - » Chain hardware
 - Links, rings, and swivels
 - Rigging block
 - Hooks
 - Hoists
 - » Air
 - » Lever
 - » Electric
 - » Manual
 - Dollies/skates/rollers
 - A-frames
 - Trolley
 - Compression hardware
 - » Wire rope clips
 - » Wedge sockets
 - Beam clamps (used as attachment point)
 - Softeners
 - Eyebolts
 - Swivel hoist rings
 - Jacks
- Know how to use below-the-hook lifting devices
 - Structural (lifting beams)
 - Mechanical lifting devices
 - Close proximity operated lifting magnets
 - Remotely operated lifting magnets
 - Scrap and material handling grapples



Reference List

The following reference materials are used by CCO's Rigger Examination Committee to verify the accuracy of CCO test questions. Prices current at press time.

CCO RIGGER REFERENCE MANUAL (REV 05/19)

Download free PDF from:

<http://nccco.org/rigger-references>

This manual was created to assist candidates preparing to take the CCO rigger certification examinations. The information contained in this manual has been compiled from partial sections of ASME B30 standards (with written permission) and the prevailing OSHA regulations for rigging practices. Partial relevant sections from the following selected standards are included:

- ASME B30.5 - 2018: Mobile and Locomotive Cranes (*Rigger Level II only*)
- ASME B30.10 - 2014: Hooks
- ASME B30.20 - 2018: Below-the-Hook Lifting Devices
- OSHA 1910.184: Slings
- OSHA 1926.251: Rigging Equipment for Material Handling
- OSHA 1926 Subpart CC: Cranes and Derricks in Construction
 - 1926.1401
 - 1926.1404-1411
 - 1926.1424-1425
 - 1926.1431-1432
 - Appendix A

CCO RIGGER REFERENCE BOOKLET (REV 04/14)

Download free PDF from:

<http://nccco.org/rigger-references>

This booklet includes rigging hardware, sling, load block, and other capacity information that may be used in CCO rigger certification exams.

ASME STANDARDS

Candidates must be familiar with the entire contents of the following ASME standards:

- ASME B30.9 – Slings (2014) \$89.00
- ASME B30.26 – Rigging Hardware (2015) \$55.00

ASME standards may be purchased directly from ASME:

Order by Internet: <http://catalog.asme.org/>

Order by mail:

American Society of Mechanical Engineers
22 Law Drive, Box 2900
Fairfield, NJ 07007
Ph: 800-843-2763
Fax: 201-882-1717

Payments accepted: check, VISA, MasterCard, American Express, Discover, Diner's Club

IPT'S CRANE AND RIGGING TRAINING MANUAL (2005) \$38.50

Order by Internet: <http://www.iptbooks.com/>

Order by mail:

IPT Publishing and Training Ltd.
Box 4323
Spruce Grove, AB, Canada
T7X 3B5
Ph: 780-962-4548
Fax: 780-962-4819

Payments accepted: VISA, MasterCard, American Express, check, money order

RIGGING FOR IRONWORKERS REFERENCE MANUAL (2013) \$30.00

This manual can be purchased by calling the Ironworkers National Training Fund at (202) 383-4870.

Payments accepted: credit card only



Practical Examination Process

RIGGER LEVEL I & RIGGER LEVEL II

ELIGIBILITY

Candidates must pass a practical exam to be certified. Candidates may take their written and practical exams in either order. Candidates have 12 months after they pass their first exam (written or practical) in which to pass the corresponding written or practical exam.

SKILLS TESTED

Certified Rigger Level I Practical Exam

The Rigger Level I Practical Examination is comprised of four main tasks that increase progressively in the skill level tested. Candidates' skills are tested in demonstrating pre-use rigging inspection, rigging hitches, rigging connections, and basic knots. Candidates are allowed 60 minutes to complete the exam.

Certified Rigger Level II Practical Exam

The Rigger Level II Practical Examination is comprised of two tasks. Candidates' skills are tested in performing a level lift and rigging frame rotation. Candidates are allowed 15 minutes to complete the level lift task and 30 minutes to complete the frame rotation task.

SCHEDULING A TEST

Candidates for the practical examination should contact their Test Site Coordinator to determine the date of the next scheduled practical exam. Candidates may also visit the CCO website at www.nccco.org/practicalsites for a listing of upcoming open test sites.

INTERRUPTION/RESTARTING

If a practical exam is interrupted for a legitimate reason (power outage, fire or severe weather alarm, emergency involving the Practical Exam Proctor or candidate), the Proctor must stop the stopwatch, have the candidate put down whatever rigging or rope he/she may be holding, and both must leave the testing room/area together.

The candidate resumes the task he/she was performing at the point of interruption, then the Proctor must read the verbatim instructions and tell the candidate how much time and/or attempts remain. The candidate shall confirm readiness to resume examination.

If the exam can't be completed that day, the score sheet must be marked "VOID" and the test must be restarted from the beginning.

PRACTICAL SCORING

Candidate performance on the Practical Examination is recorded by Practical Exam Proctors credentialed by CCO. Proctor requirements include meeting CCO requirements for certification, passing the written and practical exams, and successfully completing a credentialing workshop.

The testing procedure has been developed to provide the highest degree of standardization and reliability. The Proctor's task is primarily to record the performance of the candidate.

Candidates may lose points through operational errors in both the Level I and Level II Practical Exam(s). The scoring of candidates' performances is done off site at CCO facilities.

PRACTICAL SCORE REPORTING

All candidates receive score reports of their performance via email. The free myCCO app for Apple and Android devices provides the fastest way to access score reports; get the app at www.nccco.org/myCCO. Examination results are emailed to candidates approximately 12 business days after the receipt of practical examination score sheets by CCO.

Please note that while Practical Proctors are encouraged to expedite the shipping of score sheets after each test administration, they may batch score sheets from several test administrations over a number of days. This means that candidates may receive their score reports from CCO more than three weeks after their test administration.

Both the Practical Examination and the scoring system have been validated and verified by CCO's pilot testing program. A score of **68** represents the minimum passing score for the Rigger Level I Practical Exam. Rigger Level II candidates must pass both tasks in the same test session to achieve an overall passing score on the practical exam. Task 1 passing score is **23**; Task 2 passing score is **49**.

PRACTICAL EXAM CANDIDATE FEES

For all exam and related fees, visit the Exam Fees page on CCO's website at www.nccco.org/fees.

PRACTICAL EXAM SCORE REVIEW REQUESTS

Candidates not passing the examination(s) may request from CCO a review of their score sheets. Requests must be made in writing within three months of the test date. A Score Review Processing Fee for each test requested will be invoiced.

Score review requests should be emailed to
candidate@nccco.org.

In the event that the scoring review of a failing candidate's
score sheet results in a passing score, the Score Review
Processing Fee will be refunded in full.



Practical Examination Outline

RIGGER LEVEL I

The following is an outline of the practical testing procedure for Rigger Level I certification.

CANDIDATE INFORMATION AND INSTRUCTIONS

Candidates must report to the test site at the scheduled time. The Test Site Coordinator is responsible for setting the testing schedule. During the practical examination, candidates are under the direction of the Practical Exam Proctor and must follow the Proctor's directions at all times.

The following sections describe the specific tasks that candidates will be performing when taking the Rigger Level I Practical Examination. It is important that candidates understand these instructions. If there is anything that they do not understand, candidates should request clarification from the Proctor.

TASKS

The Rigger Level I Practical Exam consists of four tasks:

- *Task 1: Pre-Use Rigging Inspection*
- *Task 2: Rigging Hitches*
- *Task 3: Rigging Connections*
- *Task 4: Basic Knots*

Candidates will be required to complete all phases of the test in sequence. Once they have completed the Practical Exam they must leave the testing area. Only personnel involved in the administration of the test are allowed in the test area.

TIME LIMITS

There is a 60-minute time limit for the Rigger Level I Practical Examination. If a candidate does not complete the exam in 60 minutes, the exam ends and the candidate will receive credit for the tasks (or sub-tasks) completed.

PRE-TEST BRIEFING

Before the test, candidates will watch a short candidate video showing all the tasks they will be required to perform during the examination. This video is also available on the CCO website and candidates must view it within 24 hours before their practical exam(s). Separate videos are available for Rigger Level I and Rigger Level II.

CANDIDATE ID AND SIGNATURE

Prior to beginning the examination, the Proctor will ask each candidate for a government-issued photo identification that includes date of birth, such as a driver's license.

The Proctor will ask if the candidate has read the Candidate Information and Instructions and will answer any questions. The Proctor will have the candidate sign the score sheet indicating that the candidate understands the instructions for the test.

TASK 1: PRE-USE RIGGING INSPECTION

- At the Proctor's indication to start, you will inspect all of the rigging slings and hardware located in front of you. Select those items that meet ASME and OSHA *Removal from Service* criteria.
- Place the selected items to one side and say "Done" to indicate that you have finished.

TASK 2: RIGGING HITCHES

- At the Proctor's indication to start, you will be directed to demonstrate six different hitches.
- After completing each hitch, say "Done" when you are ready to have the hitch evaluated.
- You will rig a single straight-line hitch using the 5 ft. web sling and a 5/8-inch shackle on the eye bolt located on the round tube.
- All other hitches will be rigged around the round tube.

TASK 3: RIGGING CONNECTIONS

- You will have one minute to review the available rigging equipment for this testing session. The rigging has been inspected and is approved for use.
- You will choose three task assignment cards—one of each color—for the three rigging tasks. The Proctor will read the cards aloud.
- At the Proctor's indication to start, gather and assemble the rigging materials that are required to complete the assigned task according to the recommendations of the applicable ASME B30 standards.
- You will then rig and suspend the 6 in. × 30 in. square aluminum tube, as described on the task assignment card.
- When you have completed your rigging assignment, announce that you are "Done." The Proctor will evaluate your completed rigging setup.
- You will disassemble the rigging assembly before continuing on to the next rigging assignment.

TASK 4: BASIC KNOTS

- At the Proctor’s indication to start, you will tie five different knots using a rope or ropes of different diameters.
- When it is necessary, use the 4 in. round PVC pipe and eye bolt as your anchor point.
- Tie each knot and say “Done” when you are ready to have the knot evaluated.
- Place the tying rope on the table after the last knot has been evaluated.

Candidates must demonstrate the following basic knots:

- Sheet bend
- Clove hitch
- Inside bowline
- Square/reef
- Two half hitches

SCORING CONSIDERATIONS

General:

- Application of Eyebolts—Any time a shouldered eyebolt is applied, an additional washer may be used between the eyebolt shoulder and the top of the load. For securing shouldered eyebolts, double nutting and double washering is acceptable.
- Application of Swivel Hoist Rings—For securing swivel hoist rings, double nutting and double washering under the load is acceptable.
- Overlapping/Crossing Sling on a Double Wrap Choke or Basket—Any application of a sling in a double wrap choke or double wrap basket configuration shall not overlap/cross on the bottom of the load.
- Slings in Hardware—Full or partial overlapping of synthetic round or web slings in a hook, shackle, or other rigging hardware will be recorded as “Performed Correctly.”
- Location of Tag—If you wrap the tag against the load while performing a choker or basket hitch, the hitch will be recorded as “Performed Incorrectly.”
- Maximum Twist in Sling—Any sling that has more than a half twist (scored at the end of the task) will be marked as scoring deficiency.

Task 2: Rigging Hitches

- If your task involves the use of hardware that requires a torque wrench for final tightening, you are only

required to secure the hardware to finger-tight condition for the task assignment.

- Softeners are not required for these tasks.
- The use of a shackle with the double wrap choker is acceptable.
- The straight-line hitch must be demonstrated as a complete system (eye bolt, shackle, and web sling). All elements of the system must comply with applicable standards.

Task 3: Rigging Connections

- Any deviations from the instructions on the task cards chosen will result in scoring deductions.
- If the finished rigging does not match the directions, the plane (same vs. opposing) in which the rigging is used shall be marked as “Incorrect.”

Task 4: Basic Knots

- Inside Bowline—Be sure the free end is situated inside the loop.
- Clove Hitch—The two free ends of the rope must pass each other and must be contained by the loops on the PVC pipe.
- Square Knot—The free ends must be on the same side; you may use either both ropes or a single rope to tie the square knot.
- Two Half-Hitches—The running end must cross over the standing end for the second hitch.
- Sheet Bend—You must use two ropes of different diameters for the sheet bend. The rope with the larger diameter must be used as the “bight” end. The rope ends must be on the same side for the finished bend.

POST-TEST PROCEDURES

Once each candidate has completed the Practical Examination:

- The Proctor will complete the score sheet.
- The Proctor is not permitted to review the score sheet with the candidate or discuss the candidate’s performance on the test.
- Exam results will be mailed to the candidate within approximately 12 working days of CCO’s receipt of the score sheet.
- Once candidates have completed all of their tests, they must leave the test site.



Practical Examination Outline

RIGGER LEVEL II

The following is an outline of the practical testing procedure for Rigger Level II certification.

CANDIDATE INFORMATION AND INSTRUCTIONS

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

Candidates must report to the test site at the scheduled time. The Test Site Coordinator is responsible for setting the testing schedule. During the practical examination, candidates are under the direction of the Proctor and must follow the Proctor's directions at all times.

Once candidates have completed the Practical Exam, they must leave the testing area. Only personnel involved in the administration of the test are allowed in the test area.

TASKS

The Rigger Level II Practical Exam consists of two tasks:

- *Task 1: Level Lift*
- *Task 2: Rigging Frame Rotation*

TIME LIMITS

The Level Lift task has a time limit of 15 minutes and the Rigging Frame Rotation task has a time limit of 30 minutes.

UNSAFE ACTS

If at any time during the test (Rigger Level II only), you commit an unsafe act, you will be disqualified from continuing with the test. Unsafe acts include but are not limited to the following:

- Two blocking (load in tension)
- Any sliding/slippage of the sling along the frame while the sling is under tension
- Shock loading
- Point loading
- Chain hoist load line bands around the frame

Binding is now defined as: "Occurs when rigging hardware is prohibited from finding its proper alignment with the direction of force that is being applied."

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 test on that day.

PRE-TEST BRIEFING

Candidates will be shown a short video showing all the tasks they will be required to perform during the examination.

CANDIDATE ID AND SIGNATURE

Prior to beginning the examination, the Proctor will ask each candidate for a government-issued photo identification that includes date of birth, such as a driver's license.

The Proctor will ask if the candidate has read the Candidate Information and Instructions and will answer any questions. He/she will have the candidate sign the score sheet indicating that the candidate understands the instructions for the test.

PRE-TEST FAMILIARIZATION

- All rigging slings and hardware are approved for use and do not require pre-use inspection.
- A maximum of three minutes will be permitted to evaluate the rigging gear used for these tasks. If you are ready in less than three minutes, please indicate that you are ready to begin.

TASK 1: LEVEL LIFT

- At Proctor's indication to start, at which point timing begins, select and then apply slings and/or hardware to attachment points of your choice on the rigging frame in order to hoist the load and execute a level lift.
- You are permitted a maximum of two lifting attempts to achieve a position that is within two degrees of true level. A measurement of greater than two degrees on your final attempt will result in a performance deduction.
- If you are unsuccessful in your first attempt, you must return to the original starting position before starting a second attempt.
- You must use at least three but no more than four sling legs on the rigging frame.
- You may not use the second chain-fall hoist for this task
- When you have completed this task say "Done." Your rigging setup will then be evaluated.

- You will have a maximum time of 15 minutes to complete this task.
- The Proctor will indicate when there are ten, five, and one minute(s) remaining for this task.

TASK 2: RIGGING FRAME ROTATION

- At the Proctor’s indication to start, at which point timing begins, select and then apply slings and/or hardware to attachment points of your choice on the rigging frame. You must lift the frame clear of the ground and rotate the load 90 degrees under control.
- You are permitted a maximum of three attempts to rotate the frame to a position that is within six (6.0) degrees of true level. A measurement of greater than six (6.0) degrees on your final attempt will result in a performance deduction.
- A rope tied on the frame indicates which side must be in the final “up” position.
- If you are unsuccessful during any rotation attempt, you must return to the original starting position before attempting the next rotation.
- If the frame touches the ground during the first or second rotation attempt, you must return to the original starting position before attempting the next rotation.
- You must initiate this task with a minimum of three slings but no more than four, and you must have tension on at least two pick points at the end of the task.
- You may use the second chain-fall hoist for this task.
- When you have completed this task say “Done.” Your rigging setup will then be evaluated.
- You will have a maximum time of 30 minutes to complete this task.
- The Proctor will indicate when there are ten, five, and one minute(s) remaining for this task.

SCORING CONSIDERATIONS

General:

- Torquing of hardware or nuts is not required; hand-tighten these items only.
- Softeners shall not be used or provided for these tasks.
- Do not point-load rigging on the frame.
- Do not apply rigging at less than 30 degrees to the horizontal.

- Any misapplication of slings or hardware during these tasks will result in performance deductions.
- You are not permitted to attach rigging at the center of gravity.
- You may not add, adjust, or remove rigging while the load is suspended.
- A lifting attempt is defined as any movement of the frame from hoisting.
- You are not allowed to climb on the rigging frame.
- The Proctor will remove the blocking when the frame is suspended.
- A digital level may be used during these tasks.
- At the conclusion of each task, break down all rigging components and return them to the rigging table.
- Slings in Hardware—Full or partial overlapping of synthetic round or web slings in a hook, shackle, or other rigging hardware will be recorded as “Performed Correctly.”
- Application of Swivel Hoist Rings—For securing swivel hoist rings, double nutting and double washering under the load is acceptable.
- Location of Tag—If the you wrap the tag against the load while performing a choker or basket hitch, the hitch will be recorded as “Performed Incorrectly.”
- Maximum Twist in Sling—Any sling that has more than a half twist scored at the end of the task shall be marked as scoring deficiency.

Both Task 1 and Task 2

- The rigging frame must be on either of its sides in the “L” position before starting.
- “Lifting Attempts,” “Incorrectly Applied Hardware Connections,” and “Two-blocking,” are recorded during the task; all other scoring elements are recorded after you are done with the task.
- “Incorrectly Applied Hardware Connections” indicates that the rigging gear is not applied according to the recommendations of the applicable ASME B30 standards.
- Kissing or softly touching the hook to the chain-fall housing is considered a performance deduction. Hard contact of the hook with the chain-fall housing will be recorded as an Unsafe Act.
- The “Final Level” is the larger measurement of the two planes and is recorded after the you have finished the task and stated “done.”

- The “Load” and “Hook” performance deficiencies are recorded after the task is completed.
- Slings are allowed to touch the frame.
- No rigging can be attached within 12 in. of the CG.
- Application of the sling over the corner of the frame (also known as “point loading”) is considered an unsafe act while the load is freely suspended.
- Movement of the frame due to hoisting is defined as a lifting attempt.

Task 1: Level Lift

- The Level Lift Task is always performed first.
- The Rigging Frame CG will not be directly under the hook at the start of the task.

Task 2: Rigging Frame Rotation

- When using the chain hoist, the load chain must remain straight throughout the attempt. If the hoist load chain is not kept straight, it will be marked as an unsafe act and the exam will be terminated.
- If you touch the frame on the ground (after lifting the frame completely off the ground), you must return to the starting position.
- Touching the ground during the third attempt ends the task.
- You may not rotate the frame on the ground more than 15 degrees before lifting the frame off the ground.

POST-TEST PROCEDURES

Once each candidate has completed the Practical Examination:

- The Proctor will complete the score sheet.
- The Proctor is not permitted to review the score sheet with the candidate or discuss the candidate’s performance on the test.
- Exam results will be mailed to the candidate within approximately 12 working days of CCO’s receipt of the score sheet.
- Once candidates have completed all of their tests, they must leave the test site.



**NATIONAL COMMISSION FOR THE
CERTIFICATION OF CRANE OPERATORS**

2750 Prosperity Avenue, Suite 505
Fairfax, VA 22031-4312

Phone: 703-560-2391
info@nccco.org
www.nccco.org