



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

**CANDIDATE  
HANDBOOK  
(MOBILE CRANES)**



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*This Handbook and Application Packet for the Written and Practical Examinations contains the following important documents: a Candidate Written Examination Application form, a Candidate Practical Examination Application form and a Physical Examination form. 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 Candidate:*

*Welcome to the CCO national crane operator certification program.*

*The National Commission for the Certification of Crane Operators (CCO), a nonprofit corporation, was founded in January 1995 to establish a fair and independent evaluation of crane operator knowledge and skills. Key to this industry-led effort was the development of the CCO Written and Practical Examinations.*

*This nationally recognized program is the culmination of many years' hard work by experts from the varied industries and groups that use cranes, including construction, steel erection, the operating engineers, utilities, crane rental, petrochemical, pulp and paper, etc. CCO Task Forces were staffed by experts from all aspects of the crane industry—crane operators, training directors, managers, supervisors, manufacturers—representing many thousands of hours of crane operating experience. These volunteers gave freely of their time and expertise with the single goal of improving the safety of all whose work brings them into contact with cranes and lifting equipment.*

*In order to ensure CCO examinations are, and remain, a valid measurement of a crane operator's proficiency, CCO has teamed this group's knowledge and experience with the exam development expertise of International Assessment Institute. Based in Clearwater, Florida, International Assessment Institute continually analyses the performance of CCO exams and reports to CCO's Exam Management Committee, who it also guides in the development of new examinations. Additionally, International Assessment Institute assists CCO in the administration of its Written and Practical Examinations.*

*This Candidate Handbook has been developed to provide you with comprehensive information about the CCO Written and Practical Examinations. CCO recognizes the commitment you are about to make, and we want your experience to be a positive and successful one. If, after reading this Handbook, there is anything you do not fully understand or need clarifying, please call CCO at 703/560-2391, or e-mail us at [info@nccco.org](mailto:info@nccco.org). CCO staff will be happy to guide you through any aspect of the CCO national crane operator certification program.*

*Thank you for your interest—and good luck!*

**The CCO Certification Program is accredited by  
the National Commission for Certifying Agencies.**



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# Introduction

## PROGRAM DESCRIPTION

The National Commission for the Certification of Crane Operators (CCO) is an independent not-for-profit organization formed to establish and administer a nationwide program of certification for crane operators. The purpose of CCO 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, CCO 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 who pass the Core Examination and at least one (1) Specialty are eligible to take the Practical Examination in the category of the Specialty(s) passed.

The Practical Examination Specialties correspond to the Written Exam Specialties except that a candidate may pass either the Lattice Boom Crawler Crane or the Lattice Boom Truck Crane Written Specialty to be eligible to take the Lattice Boom Crane Practical Specialty. 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. 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/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 providing the certificant passed the

practical examination in order to certify initially, and meets experience and medical (physical) requirements.

## DEVELOPMENT OF THE CCO 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. A survey was given to a representative number of crane operators, who validated that the knowledge recommended by the experts was vital to safe operations. The test blueprints or content specifications were generated from the validation study.

Development of the **written examinations** (Core and Specialties) involved panels 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 question bank. These questions are selected for the examination on the basis of the content areas and specialties as defined by the test blueprints.

The CCO **practical examinations** were developed as a fair and objective assessment of the essential skills a crane operator needs in order to safely operate mobile cranes.

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

CCO teamed their knowledge and experience with the exam development expertise of International Assessment Institute who guided the CCO 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 CCO Task Force, International Assessment Institute also designed the Practical Examiner Accreditation Program whereby CCO trains and accredits CCO-certified crane operators to administer CCO 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 CCO's Substance Abuse Policy
- Pass Written Examinations (Core and one Specialty)
- Pass Practical Examination(s)

Candidates must pass the Practical exam within twelve months of passing the written examination.

## PHYSICAL EVALUATION

Candidates must submit one of the following:

- CCO Physical Examination Form
- A current DOT (Department of Transportation) Medical Examiner's Certificate

Certified crane operators must continue to meet ASME B30.5 physical requirements throughout their certification period. The CCO certification card is valid only with a current medical certificate that meets the requirements of ASME B30.5.

## CCO WRITTEN EXAMINATIONS

The written examination program consists of a Core examination in crane operation, as well as four crane Specialty examinations. The Core examination has 90 multiple-choice questions. Candidates are allowed 90 minutes to complete the Core examination.

All Specialty examinations consist of 26 multiple-choice questions. Candidates are allowed 55 minutes to complete each Specialty examination.

All candidates are required to take the Core examination regardless of the Specialty(s) in which they wish to be certified.

CCO Specialty Examinations:

- Lattice Boom Crawler Cranes
- Lattice Boom Truck Cranes
- Large Telescopic Boom Cranes (greater than 17.5 Tons)
- Small Telescopic Boom Cranes (less than 17.5 Tons)

Candidates must register for the Core and at least one of the Specialty examinations. Certification requires competency in both the Core and one or more Specialty categories. Candidates meeting the eligibility requirements and passing the written examination are eligible to take the Practical Examination.

## CCO PRACTICAL EXAMINATIONS

The CCO Practical Examination demonstrating crane operation proficiency is available in three (3) crane types:

- Lattice Boom Cranes
- Large Telescopic Boom Cranes (greater than 17.5 Tons)
- Small Telescopic Boom Cranes (less than 17.5 Tons)

A candidate must pass both the written Core and at least one Specialty examination as well as the corresponding Practical Exam in order to be certified for a 5 year period.

## CCO CERTIFICATION TIMEFRAMES

- Candidates have 12 months from the time they pass the first written test (Core or Specialty) in which to pass the next written examination (Core or Specialty).
- Candidates have 12 months from the time they pass both the Core and Specialty in which to pass the Practical exam.
- Candidates who subsequently pass any additional Specialty written exams have 12 months in which to pass the corresponding Practical exam.
- If a certified candidate subsequently becomes certified in additional Specialties, the five-year certification period for the additional Specialties begins at the same time as he/she was originally certified, i.e. all Specialties expire on the same date regardless of when in the five-year certification period the candidate passed them.
- Candidates who passed both the Core and a Specialty written exam(s) in 1999 had a three-year certification. If they passed the Practical Exam in one or more Specialties before December 31, 2000, the 3-year certification was extended to a 5-year certification in all specialties.

## RECERTIFICATION

CCO 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
- Passing the Practical Examination(s) if they have not already done so
- Continuing to meet Medical Requirements
- Compliance with CCO's Substance Abuse Policy

Candidates who have already taken and passed the Practical Examination and who can document at least 1,000 hours crane-related experience during their period of certification, do not need to take the practical exam to recertify.

Crane-related experience is defined as: operating, maintenance, inspection or training.

However, candidates who do need to take the Practical exam for any reason must do so **before** their certification expires. There is no "grace period" after the date of expiration. Candidates whose certification has lapsed must take the full written *and* practical examinations over again in order to be recertified.

The written recertification examination consists of a Core examination in crane operation, as well as four Specialty examinations.

The Core examination has 40 multiple-choice questions with a time limit of 40 minutes.

Each Specialty examination consists of 10 multiple-choice questions with a time limit of 25 minutes. Two of the questions in each Specialty exam are calculation load chart questions.

All candidates are required to take the Core examination regardless of the Specialty(s) in which they wish to be recertified.

Recertification candidates are allowed two (2) attempts to pass the recertification Core and Specialty exams before their certification expires. Candidates who are unsuccessful after two (2) attempts must take and pass the regular Core and Specialty 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 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.]

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 Specialties may add a new Specialty at the same time as they take their recertification examinations by taking the full examination in that Specialty.

For more information about recertification, please contact CCO's Recertification Department at (703) 560-2391 or via e-mail at [info@nccco.org](mailto:info@nccco.org).

## DISCIPLINARY POLICY

CCO's Review 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 CCO or its agents.
3. Expiration of a candidate's medical certificate.
4. Evidence of non-compliance with CCO's Substance Abuse Policy.
5. Evidence of culpability in an accident during certification period.

Candidates who wish to appeal a decision regarding revocation of a certificant's status, must do so in writing to the Appeals Committee, stating the grounds for the appeal. This should be addressed to:

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

## **SUBSTANCE ABUSE POLICY**

It is the policy of CCO that crane operators shall not use a prescribed or over-the-counter substance which would impair the 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 that the prescribed substance or drug will not adversely affect the operator's ability to safely operate a mobile crane.

CCO-certified crane operators shall comply with the substance abuse testing provisions of ASME B30.5.

It is a condition of certification that crane operators certified by CCO 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.

Duplicate cards, 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 \$25.00.

## **CHANGE OF ADDRESS**

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

Changes of address should be sent to International Assessment Institute (IAI). They must be in writing, but can be sent via letter or fax. A form is provided for this purpose in this Handbook.

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# Written Examination Process

## APPLICATION PROCESS TO TAKE THE WRITTEN EXAMINATION

Candidates wishing to sit for the CCO examination(s) may request an application form or obtain further information from either the National Commission for the Certification of Crane Operators (CCO) or International Assessment Institute. Candidate applications must be submitted with the appropriate documentation to International Assessment Institute. Applications are due two (2) weeks prior to the scheduled examination date. The application deadline examples are listed on page 8.

Information about the specific locations of the test sites will be available approximately four (4) weeks prior to the examination. Candidates eligible to sit for the examinations will receive an admission letter approximately one (1) week before the scheduled test administration date.

### Candidates Requesting Special 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 (4) weeks prior to your scheduled test date. For further information, see the *Written Examination Test Site Coordinator Handbook*.

## SUBMISSION OF APPLICATION

The Candidate Application and Physical Examination forms are located at the back of this Handbook. These forms can be easily photocopied for your use.

All applications with appropriate fees and the Physical Examination form, as well as any correspondence and requests for information concerning the administration of the CCO Certification Examinations, should be directed to:

International Assessment Institute  
 — Attention: CCO Testing  
 600 Cleveland Street, Suite 900  
 Clearwater, Florida 33755  
 Phone: (727) 449-8525 — Fax (727) 461-2746

Check your application to ensure that all information is accurate and complete. In addition to your completed application, make sure you have enclosed:

- the appropriate fees
- a completed and signed CCO Physical Examination Form or a current DOT Medical Examiner's Certificate

Follow the directions carefully when filling in the information required. Incomplete applications, incorrect payment, and/or inaccurate documentation will delay the processing and incur additional fees. It could result in your **NOT** being able to sit for the examination(s).

Therefore, please be sure your application is complete and the payment is correct.

### Deadlines

**Please note that all deadlines are UPON RECEIPT deadlines and that candidates and Test Site Coordinators are solely responsible for making sure that complete and accurate applications reach International Assessment Institute by the stated deadline.**

## APPLICATION FEES

The appropriate fees must be enclosed with your application. Checks and money orders payable to International Assessment Institute are preferred. You may also pay by credit card — VISA or MasterCard. Do not send cash. Please do not staple your check or money order to your application form, but do include your payment in the envelope with all the other application materials. *All returned checks that are unable to be processed will be subject to a \$25 fee.*

### Application Fees for Written Examinations are:

Core Exam plus any one (1) Specialty Exam	\$165
Core Exam plus two (2) Specialties	\$175
Core Exam plus three (3) Specialties	\$185
Core Exam plus four (4) Specialties	\$195

### Retesting Application Fees are:

Core Exam Only (Specialty passed) or Core plus one Specialty	\$165
Core Exam plus two (2) Specialties	\$175
Core Exam plus three (3) Specialties	\$185
Core Exam plus four (4) Specialties	\$195
One (1) Specialty Exam Only (Core Passed)	\$ 65
Two (2) Specialty Exams (Core Passed)	\$ 75
Three (3) Specialty Exams (Core Passed)	\$ 85
Four (4) Specialty Exams (Core Passed)	\$ 95

*(Fees continued)*

### ***Application Fees for Recertification***

#### ***Written Exams are:***

Core Exam plus any one (1) Specialty Exam	\$150
Core Exam plus any two (2) Specialty Exams	\$155
Core Exam plus any three (3) Specialty Exams	\$160
Core Exam plus any four (4) Specialty Exams	\$165

#### ***Other Fees:***

You will be charged an additional \$50 fee if your application is late.

You will be charged an additional \$25 fee if:

- you wish to reschedule without a valid reason (see *Emergency Cancellations or Withdrawals*).
- you need a duplicate/replacement certification card.

You will be charged an additional \$30 fee if:

- your application form is incomplete
- your physical exam form is not included
- you do not send in full payment
- your credit card cannot be processed for any reason
- you want to add to, or change, the exams you want to take after scheduling has been completed (in addition to the exam fee).

Your application materials must be at International Assessment Institute Assessment's office according to the sample test schedule outline in this Candidate Handbook.

Applications received after the main application deadline, but at least four (4) business days prior to the exam administration deadline, can be accepted for an additional \$50 late fee. For example, for a test administration on a Saturday, late applications that arrive at IAI's testing office by 5pm (ET) on the Monday evening prior can be accepted.

Candidate applications that arrive after that time cannot be accepted. **Walk-in candidates cannot be accepted under any circumstances.**

### **RESCHEDULING, CANCELLATIONS, AND WITHDRAWALS**

Should you be unable to sit for the examination, International Assessment Institute must receive notification in writing no later than seven (7) business days prior to the examination date. Your fees will be held until you reschedule. When you reschedule you will need to pay an additional \$25.00 rescheduling fee. Candidates who wish to reschedule their CCO written examination **MUST** notify International Assessment Institute and submit the necessary documentation and fees to International Assessment Institute by the deadline for the rescheduled test date.

***Candidates withdrawing or canceling after the deadline or not sitting for the examination will forfeit all application fees and will NOT receive a refund.***

#### **Emergency Cancellations or Withdrawals**

ONLY the following situations will be accepted as grounds for emergency cancellations or withdrawals:

- 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

Requests for medical and personal emergency withdrawals are handled by International Assessment Institute. Please write a letter to International Assessment Institute describing your situation. Be sure to include your full name, address and social security number along with the scheduled test date, site number, and supporting documentation indicated above.

International Assessment Institute **MUST** receive your written notification within seven (7) business days after the scheduled examination date or you will forfeit **ALL** application fees. You will be allowed to reschedule for a future examination administration.

***You will NOT receive a refund if you decide you no longer wish to take the test.***

## TEST ADMINISTRATION SCHEDULE FOR THE CCO EXAMINATIONS

The CCO written certification examinations are available for administration on demand with at least four (4) weeks notice.

### APPLICATION DEADLINES

Tests can be administered at any time so long as the application deadlines are adhered to. Sample deadlines shown are for a test date of January 29.

		JANUARY						
		S	M	T	W	T	F	S
Test Site Application Form and Written Test Administration Request Form due four (4) weeks prior to test date.	●		1	2	3	4	5	6
		7	8	9	10	11	12	13
Candidate Applications due two (2) weeks prior to test.	●	14	15	16	17	18	19	20
		21	22	23	24	25	26	27
Test Day	●	28	29	30	31			

### ADMISSION LETTERS

Approximately one week before the scheduled test date, registered and eligible candidates approved to take the CCO written certification examinations will receive an admission letter by mail. The admission letter will contain information regarding the test center address, the reporting time, the examination(s) the candidate registered for and the materials candidates will need to bring with them on the day of the administration. This admission letter must be presented at the test site to gain admittance to the examination(s).

*No candidate will be allowed to sit for the examination unless an admission letter, valid for the specific test date, is presented. Candidates who have registered late and paid the candidate late fees will need to present their photo ID at the test site.*

### TEST SITE INFORMATION

#### Identification at the Test Site

In addition to an admission letter valid for the specific test date, candidates must bring government issued photo identification to the test site on the day of the administration. Candidates will be required to sign the test site roster upon entry to the testing area. Acceptable forms of photo identification are:

- passport
- government issued driver's license
- work identification

**NOTE:** Candidates without appropriate identification documents will NOT be admitted to take the written certification examination(s).

#### Materials to Bring to the Test Site

Each candidate must bring the following items to the test site:

- Government issued photo ID
- The admission letter for the specific test date
- Two (2) sharpened #2 pencils (to complete the examination answer sheet)
- A good eraser

**NOTE:** No books, scratch paper, calculators, beepers, cellular phones or other materials will be allowed in the examination room.

#### Test Security

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

- This examination is the exclusive property of CCO.
- This examination and the questions contained therein are protected by federal copyright law. No part of the examination(s) may be copied, reproduced in part or whole by any means whatsoever, including memorization.
- Theft or attempted theft of an examination booklet or any of its pages is punishable as a felony.
- Candidate participation in any irregularity occurring 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.
- Candidates verify that they have successfully met the physical/medical requirements and are eligible to take this examination. If at any time it is confirmed a candidate has not met all the requirements, candidates will no longer be eligible for certification.
- A candidate's signature on the answer sheet for the administration of the examination confirms that the candidate has read and understands the above statements.

### **Candidate Question Comment Forms**

Candidates can comment on the examination(s) as a whole or on specific items within an examination by writing the comments on the Candidate Question Comment Form. These comments should be accompanied by the candidate's name (which is optional), the specific examination and question referred to, the site code and test date. Examination comments are reviewed by CCO content experts on a regular basis.

***NOTE:** Only comments completed on the Candidate Question Comment Form at the test site will be considered for review.*

### **TEST SCORING INFORMATION**

#### **Test Scoring**

The CCO written certification 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 the "passing score" to pass the test. The passing scores represent absolute standards and are determined by panels of CCO content experts using psychometrically accepted standard-setting methodology.

#### **Score Reporting**

The written examinations are electronically scored by International Assessment Institute. For this reason, it is important to complete the answer sheet according to the instructions provided by the Chief Examiner 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.

All candidates will receive a score report of their performance. Examination results are mailed to candidates approximately twelve (12) business days after the examination administration.

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 equivalent for all administrations of the examination(s). The scaled score is not a "number answered correctly" score.

Candidate results will be reported as a scaled score, on a scale ranging from 0 to 100 points, with a score of 70 representing the "minimum passing" score. **Candidate scores cannot be given over the telephone.**

#### **Hand Score Requests**

Candidates not passing the examination(s) may request from International Assessment Institute a hand scoring of the answer sheet, provided the request is made in writing within three months of the test date, and the request is accompanied by a \$50 check or money order made payable to International Assessment Institute. The \$50 fee covers all examinations taken on the same test date. Requests should be mailed to:

#### **International Assessment Institute**

##### **— Attention: CCO Testing**

600 Cleveland Street, Suite 900, Clearwater, Florida 33755

Phone: (727) 449-8525 — Fax (727) 461-2746

In the event that the hand scoring of a failing candidate's answer sheet results in a passing score, the \$50 fee will be refunded in full.

#### **Retaking the Examination(s)**

Candidates who fail an examination(s) may retake the examination(s). Candidates will need to reapply and pay all corresponding fees.

#### **Information Release Policy**

CCO may release any information regarding a candidate's examination application and a candidate's examination administration to any employer, regulatory agency or any other person or entity that may inquire in writing to the Commission.

The name and certification status of individuals who have successfully completed the CCO examinations may be published and released upon request to employers and other interested parties. CCO and International Assessment Institute will discuss score-related matters with the candidate or the candidate's legal representative only.



# Written Exam Outline (Core Examination)

The Core examination portion of the CCO written certification program tests the following knowledge areas relating to the operation of cranes:

## **Domain 1: Site**

*(Approximately 24% of the test)*

## **Domain 2: Operations**

*(Approximately 23% of the test)*

## **Domain 3: Technical Knowledge**

*(Approximately 28% of the test)*

## **Domain 4: Manufacturers' Load Charts**

*(Approximately 25% of the test)*

### **DOMAIN 1: SITE**

*(Approximately 24% of the test)*

1. Know that the suitability of the supporting surface to handle the expected loads of the operation must be assessed. 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 mats, blocking or cribbing and outriggers or crawlers as they affect the suitability of supporting surfaces to handle the expected loads of the operation.
3. Know site hazards and restrictions, such as electric power lines and piping.
4. Know how to identify and evaluate site access and usability.
5. Know how to review planned operations and requirements with site supervision (i.e., signal person), to include determination of working height, boom length, load radius and travel clearance.
6. Know how to determine if there is adequate room for extension of crawlers or outriggers/stabilizers and counterweights.

### **DOMAIN 2: OPERATIONS**

*(Approximately 23% of the test)*

1. Know which federal regulations and industry standards affect safe operation of the crane, including ASME/ANSI B30.5.

2. Know how to inspect the crane for unsafe conditions, complete required records, and communicate the unsafe conditions to the proper authority.
3. Know how to pick, carry, swing and place the load smoothly and safely on rubber tires and on outriggers/stabilizers or crawlers (where applicable).
4. Know how to communicate at the site with management, the crew and the signal person.
5. Know proper procedures and methods of reeving all wire ropes and methods of reeving multiple-part lines and selecting the proper load block and/or ball.
6. Know standard signals as specified in ASME/ANSI B30.5.
7. Know how to react to changes in conditions that affect the safe operation of the crane.
8. Know how to shut down and secure the crane properly when leaving it unattended.
9. Know the manufacturer's specifications for operating in various weather conditions, and understand how environmental conditions affect the safe operation of the crane.
10. Know how to properly level the crane.
11. Know how to verify the weight of the load and rigging prior to initiation of the lift.
12. Know how to determine where the load is to be picked up and placed and how to verify the radii.
13. Know basic load rigging procedures.
14. Know how to perform daily maintenance and inspection.
15. Know how to use the following operator aids:
  - (a) LMI and rated load indicator
  - (b) wind indicator
  - (c) anti-two block device
  - (d) boom angle indicator
  - (e) load indicating device
  - (f) boom length indicators
  - (g) drum rotation indicators

16. Know that the following operations require specific procedures and skill levels:
  - (a) multi-crane lifts
  - (b) suspended personnel platforms
  - (c) clamshell/dragline operations
  - (d) pile driving and extracting
  - (e) concrete operations
  - (f) demolition operations
  - (g) barge operations
  - (h) magnet operations
  - (i) multi-drum operations
17. Know the proper procedures for operating safely under the following conditions:
  - (a) traveling with suspended loads
  - (b) approaching two-blocking
  - (c) operating near electric power lines
  - (d) using suspended personnel platform
  - (e) using other than full outrigger/crawler extensions
  - (f) lifting loads from beneath the surface of the water
  - (g) using various approved counterweight configurations
  - (h) handling loads out of the operator's vision ("operating in the blind")
  - (i) using electronic communications techniques, such as radios
18. Know the proper procedures for load control and the use of hand-held tag lines.
19. Know emergency response procedure for:
  - (a) fire control
  - (b) electric power line contact
  - (c) loss of stability
  - (d) control malfunction
  - (e) two-blocking
  - (f) overload
  - (g) carrier or travel malfunction
20. Know how to properly use the outriggers in accordance with manufacturer's specifications.

### **DOMAIN 3: TECHNICAL KNOWLEDGE**

*(Approximately 28% of the test)*

1. Know the functions and limitations of the crane and attachments.
2. Know wire rope:
  - (a) construction and breaking strength
  - (b) inspection procedures
  - (c) replacement criteria and procedures
  - (d) capacity and when multi-part rope is needed
  - (e) maintenance
  - (f) relationship between line pull and safe working load.
3. Know how to determine the manufacturer's recommended rope for the crane.
4. Know rigging devices and their use, such as:
  - (a) slings
  - (b) spreaders
  - (c) lifting beams
  - (d) wire rope fittings, such as clips, shackles and wedge sockets
  - (e) saddles (softeners)
  - (f) clamps (beams)
5. Know the limitations of protective measures against electrical hazards:
  - (a) grounding
  - (b) proximity warning devices
  - (c) insulated links
  - (d) boom cages
  - (e) proximity to electric power lines, radio and microwave structures
6. Know the effects of load share and load transfer in multi-crane lifts.
7. Know basic crane terms.
8. Know the basics of machine power flow systems.
  - (a) mechanical
  - (b) electrical
  - (c) pneumatic
  - (d) hydraulic
  - (e) combination
9. Know the significance of the instruments and gauge readings.
10. Know the requirements of pre-operation and inspection and maintenance.

11. Know how to use operational assist devices which include:
  - (a) anti-two lock devices
  - (b) load moment indicators and rated load indicators
  - (c) outrigger position indicators
  - (d) mechanical levels
  - (e) boom angle indicators
  - (f) load indicating devices
  - (g) boom stops and boom hoist disconnects
  - (h) radius indicators
  - (i) drum rotation indicators
  - (j) boom length indicators
12. Know how to calculate net capacity for every possible configuration of crane using the manufacturer's load chart.
13. Know how to use manufacturer approved attachments and their effect on the crane.
14. Know how to obtain dimensions, weight and center of gravity of the load.
15. Know the effects of dynamic loading from:
  - (a) wind
  - (b) stopping and starting
  - (c) impact loading
  - (d) moving with the load
16. Know the difference between duty-cycle and lifting operations.
17. Know the effect of side loading.
18. Know the principles of backward stability.
19. Know the effects of thermal expansion and contraction in hydraulic cylinders.

#### **DOMAIN 4: MANUFACTURERS' LOAD CHARTS**

*(Approximately 25% of the test)*

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 application.
3. Know how to use load charts. This includes knowing:
  - (a) the operational limitations of load charts and footnotes
  - (b) how to relate the chart to the configuration of the crane, crawlers, or outriggers extended or retracted, jib erected or offset, and various counterweight configurations
  - (c) the difference between structural capacity and capacity limited by stability
  - (d) what is included in load chart capacity
  - (e) the range diagram and its relationship to the load chart
  - (f) the work area chart and its relationship to the load chart
  - (g) where to find and how to use the "parts-of-line" information
4. Know how to use the load chart together with the load indicators and/or load moment devices.

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# Written Exam Outline (Specialty Examinations)

The Specialty Examinations for the CCO certification program test the following knowledge areas relating to the operation of each of these types of cranes:

- Lattice Boom Truck Cranes
- Lattice Boom Crawler Cranes
- Large Telescopic Boom Cranes (above 17.5 Tons)
- Small Telescopic Boom Cranes (up to 17.5 Tons)

## **Domain 1: Site**

*(Approximately 24% of the test)*

## **Domain 2: Operations**

*(Approximately 22% of the test)*

## **Domain 3: Technical Knowledge**

*(Approximately 28% of the test)*

## **Domain 4: Manufacturers' Load Charts**

*(Approximately 26% of the test)*

## **DOMAIN 1: SITE**

*(24% of the test)*

1. Know the proper use of mats, blocking or cribbing and outriggers or crawlers as they affect the suitability of supporting surfaces to handle the expected loads of the operation.

## **DOMAIN 2: OPERATIONS**

*(Approximately 22% of the test)*

1. Know how to inspect the crane for unsafe conditions, complete required records and communicate the unsafe conditions to the proper authority.
2. Know how to pick, carry, swing and place the load smoothly and safely on rubber tires and on outriggers/stabilizers or crawlers (where applicable).
3. Know proper boom assembly and disassembly techniques:
  - (a) lattice booms
  - (b) extension and retraction of "power pinned" and/or manual boom "extension"
  - (c) erection and dismantling of lattice extension jibs
4. Know how to react to changes in conditions that affect the safe operation of the crane.

5. Know how to shut down and secure the crane properly when leaving it unattended.
6. Know how to prepare the crane for transportation by loading or unloading on trailers and be familiar with the differences between rail and barge loading.
7. Know how to move the crane (no load) safely under its own power:
  - (a) between job sites
  - (b) within job sites
  - (c) loading and unloading on trailers
8. Know the manufacturer's specifications for operating in various weather conditions and understand how environmental conditions affect the safe operation of the crane.
9. Know how to properly level the crane.
10. Know how to perform daily maintenance and inspection.
11. Know how to use the following operator aids:
  - (a) LMI and rated load indicator
  - (b) wind indicator
  - (c) anti-two block device
  - (d) boom angle indicator
  - (e) load indicating device
  - (f) boom length indicators
  - (g) drum rotation indicators
12. Know the proper procedures for operating safely under the following conditions:
  - (a) traveling with suspended loads
  - (b) approaching two-blocking
  - (c) operating near electric power lines
  - (d) using suspended personnel platforms
  - (e) using other than full outrigger/crawler extensions
  - (f) lifting loads from beneath the surface of the water
  - (g) using various approved counterweight configurations
  - (h) handling loads out of the operator's vision ("operating in the blind")
  - (i) using electronic communication techniques, such as radios

13. Know emergency response procedures for:
  - (a) fire control
  - (b) electric power line contact
  - (c) loss of stability
  - (d) control malfunction
  - (e) two-blocking
  - (f) overload
  - (g) carrier or travel malfunction

### **DOMAIN 3: TECHNICAL KNOWLEDGE**

*(Approximately 28% of the test)*

1. Know the functions and limitations of the crane and attachments.
2. Know basic crane terms.
3. Know the basics of machine power flow systems:
  - (a) mechanical
  - (b) electrical
  - (c) pneumatic
  - (d) hydraulic
  - (e) combination
4. Know how the boom hoist and load hoist(s) are driven and engaged to the power source.
5. Know the requirements of standard and optional controls.
6. Know the requirements of pre-operation inspection and maintenance.
7. Know how to use operational assist devices which include:
  - (a) anti-two block
  - (b) load moment indicators and rated load indicators
  - (c) outrigger position indicators
  - (d) mechanical levels
  - (e) boom angle indicators
  - (f) load indicating devices
  - (g) boom stops and boom hoist disconnect
  - (h) radius indicators
  - (i) drum rotation indicators
  - (j) boom length indicators
8. Know how to calculate net capacity for every possible configuration of the crane using the manufacturer's load chart.
9. Know how to use manufacturer approved attachments and their effect on the crane.

10. Know the function and safe use of crawler position (extended or retracted), outriggers, and/or stabilizers.
11. Know how to assemble and disassemble boom sections, extensions and jib configurations.
12. Know the effects of thermal expansion and contraction in hydraulic cylinders (where applicable).

### **DOMAIN 4: MANUFACTURERS' LOAD CHARTS**

*(Approximately 26% of the test)*

1. Know the terminology necessary to use load charts.
2. Know how to use load charts. This includes knowing:
  - (a) the operational limitations of load charts and footnotes
  - (b) how to relate the chart to the configuration of the crane, crawlers or outriggers extended or retracted, jib erected or offset, and various counterweight configurations
  - (c) the difference between structural capacity and capacity limited by stability
  - (d) what is included in load chart capacity
  - (e) the range diagram and its relationship to the load chart
  - (f) the work area chart and its relationship to the load chart
  - (g) where to find and how to use the "parts-of-line" information



# Sample Questions

The following are sample test questions typical of the style and content of the questions used in the CCO written certification examinations. Additional sample questions can be found at CCO's website, [www.nccco.org](http://www.nccco.org).

1. Unless the manufacturers state otherwise, truck cranes generally have no lifting capacity over which area?
  - A. The side
  - B. The rear
  - C. The front
  - D. The outriggers
2. "Working radius" is defined as the distance from the
  - A. base of the boom to the center of the load.
  - B. front of the crane to the center of gravity of the load.
  - C. center of rotation of the crane to the center of the load.
  - D. center of rotation of the crane to the center of gravity of the load.
3. If a bold line is shown on a load chart, the capacities below the line
  - A. are based on the structural strength of the crane.
  - B. must not be used.
  - C. are based on the stability of the crane.
  - D. should only be used if the crane is set up on outriggers.
4. Rough terrain crane capacities are generally greater over the
  - A. front.
  - B. rear.
  - C. right side.
  - D. left side.
5. According to federal requirements, under what conditions is it OK for a person to ride the headache ball?
  - A. When there is no other way to gain access
  - B. When the lift has been approved by an engineer
  - C. When other means would be more dangerous
  - D. It is never OK

D	5
A	4
C	3
D	2
C	1
Question #	Answer



## Reference List

The following reference materials are used by CCO's Examination Committee to verify the accuracy of CCO test questions.

Candidates are strongly advised to become familiar with manufacturers' load charts in preparing for the CCO certification examinations and check all prices.

**ANSI/ASME, B30.5, 2000** \$70.00  
**MOBILE AND LOCOMOTIVE CRANES**  
(and successive addenda)

**ANSI/ASME, B30.23** \$49.00  
**PERSONNEL LIFTING SYSTEMS**

**Order by Mail:**

American Society of Mechanical Engineers  
22 Law Drive, Box 2900  
Fairfield, NJ 07007  
Ph: 800-843-2763 Fx: 201-882-1717  
Website: [members.asme.org/catalog](http://members.asme.org/catalog)

Check, VISA, MasterCard, American Express,  
Discover, Diner's Club

**MOBILE CRANE MANUAL** \$61.00  
**RIGGING MANUAL** \$40.00

**Order by Mail:**

Construction Safety Association of Ontario  
21 Voyager Court South  
Etobicoke, Ontario M9W 5M7 Canada  
Ph: 800-781-2726 Fx: 416-674-8866  
Website: [www.csa.org](http://www.csa.org)

Check, VISA, MasterCard, American Express, Money Order

**OCCUPATIONAL SAFETY AND HEALTH  
ADMINISTRATION, US DEPT. OF LABOR  
CODE OF FEDERAL REGULATIONS,  
PARTS 1926.550 AND 1910.180**

**Order by Internet:**

[www.osha.gov](http://www.osha.gov)

**Order by Mail:**

CCO  
2750 Prosperity Avenue, Suite 505  
Fairfax, VA 22031-4312  
Ph: 703-560-2391 Fx: 703-560-2392  
E-Mail: [info@nccco.org](mailto:info@nccco.org)

**BOB'S RIGGING & CRANE HANDBOOK**

Desk Size \$23.50  
Pocket Size \$12.50

**Order by Mail:**

Pellow Engineering Services, Inc.  
11200 Juniper Drive  
Leawood, KS 66211-1755  
Ph: 877-473-5569 Fx: 877-473-5569  
Website: [members.aol.com/dpellow](http://members.aol.com/dpellow)  
VISA, MasterCard, Check, Money Order

**CRANE SAFETY MANUAL** \$3.00

**Order by Mail:**

111 East Wisconsin Ave, Suite 940  
Milwaukee, WI 53202-4879  
Ph: 414-272-0943 Fx: 414-272-1170  
Website: [www.aem.org](http://www.aem.org) (click "AEM Store")  
VISA, MasterCard, Check, Money Order

**IPT'S CRANE AND  
RIGGING HANDBOOK** \$18.00 + S&H \$3.00

**IPT'S CRANE AND  
RIGGING MANUAL** \$31.00 + S&H \$7.00

**Order by Mail:**

IPT Publishing and Training Ltd.  
P.O. Box 9590  
Edmonton, Alberta, T6E 5X2 Canada  
Ph: 780-962-4548 Fx: 780-962-4819  
Website: [www.iptbook.com](http://www.iptbook.com)  
VISA, MasterCard, American Express, Check, Money Order

**MOBILE CRANING TODAY** \$22.00

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Operating Engineers Training  
Institute of Ontario (OETIO)  
P.O. Box 636  
Morrisburg, Ontario, K0C 1X0 Canada  
Ph: 613-543-2911 Fx: 613-543-4136  
VISA, MasterCard, American Express, Check, Money Order,  
Purchase Order



# Practical Examination Process

## ELIGIBILITY

Candidates who pass the Core Examination and at least one Specialty Examination may apply to take the practical examination.

A candidate may take the practical examination only in those categories (s)he has passed on the written examination. Candidates have **12 months** from taking the written examination to take the practical examination.

Candidates who do not take the practical examination within 12 months of passing the written examination must retake and pass the written examination before again being eligible to take the practical examination.

To establish eligibility, candidates must be able to provide at the time of application a copy of a score report, certificate, or certification card.

## SKILLS TESTED

The CCO practical examinations are available on three crane types:

- Lattice Boom Cranes
- Large Telescopic Boom Cranes (greater than 17.5 Tons)
- Small Telescopic Boom Cranes (less than 17.5 Tons)

Candidates may take the practical examination on one, two, or all three of the crane types provided they have already passed the written examination in the corresponding category.

The practical examination is comprised of four main tasks that increase progressively in the skill level tested. Skills tested are: hoisting, booming, swinging, following hand signals, and combination (multi-function) operations. Crane operation with load and without load is required.

CCO adapts the test site layout for each model of crane used for the practical examination to ensure the examination remains standardized for all candidates wherever and whenever they may test.

A candidate may take the practical examination only in those categories that he/she has passed on the written examination. For example:

- To test on a Lattice Boom Crane, a candidate must have passed either the Lattice Boom Truck or Lattice Boom Crawler Crane written examination.

- To test on a Small Telescopic Crane (less than 17.5 Tons), a candidate must have passed the Small Telescopic Crane written examination.
- To test on a Large Telescopic Crane (greater than 17.5 Tons), a candidate must have passed the Large Telescopic Crane written examination. Candidates for the Large Telescopic Crane category may test on a fixed cab machine but their certification cards will be endorsed TLL: Fixed Cab Only.

## SCHEDULING A TEST

A candidate for the practical examination should contact the Test Site Coordinator who organized the written examination to determine the date of the next scheduled practical exam. Alternatively, the candidate may contact CCO for this information.

You must bring your completed Practical Exam Candidate Application Form with you to your scheduled examination, along with any required supporting materials.

## TEST DAY

Candidates must report to the test site at the scheduled time. Candidates are required to bring personal protective equipment to wear during the test, including as a minimum: hard hat, work boots, and suitable work clothing.

## PRACTICAL SCORING

Candidate performance on the Practical Examination is recorded by Practical Examiners accredited by CCO. Examiner requirements include meeting CCO requirements for certification, passing the written and practical exams and successfully completing an accreditation workshop.

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

A candidate may lose points either through operational errors or exceeding established time limits. The scoring of candidates' performance is done off-site at the facilities of International Assessment Institute.

## **PRACTICAL SCORE REPORTING**

All candidates receive a score report of their performance. Examination results are mailed to candidates approximately twelve (12) business days after the receipt of practical examination score sheets by International Assessment Institute.

Please note that while Practical Examiners are encouraged to expedite score sheets after each test administration, they may “batch” score sheets from several test administrations over a number of days. This may mean candidates receive their score reports from IAI more than three weeks after their test administration.

Both the practical examination and the scoring system have been validated by CCO’s pilot testing program and verified by International Assessment Institute. The score of 75 represents the “minimum passing” score for the practical examinations.

## **PRACTICAL CANDIDATE FEES**

The examination fee for testing on one crane type is \$60. For each additional crane type applied for and taken at the same time, the fee is \$10. The appropriate fees must be submitted with your application through your test site coordinator. The same fees apply for retest candidates.

Practical Candidate Fees

- 1 Crane Type \$ 60
- 2 Crane Types \$ 70
- 3 Crane Types \$ 80

## **PRACTICAL HAND SCORE REQUESTS**

Candidates not passing the Practical Examination(s) may request from IAI a detailed score report of their results. This provides an overview of performance in each category based upon the crane type.

The request must be made within three (3) months of the test date and be accompanied by a check/ money order payable to IAI (or with VISA/ MasterCard number) for \$25 for *each* test requested.



# 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 Tasks are:*

- Task 1: Place Overhaul Ball in Stop Circle
- Task 2: Follow Hand Signals
- Task 3: Place Overhaul Ball in Barrels
- Task 4: Negotiate Zigzag Corridor With Test Weight

There is also a Pre-Test Briefing, a Pre-Test Familiarization Period, and a Pre-Task Familiarization Period (prior to the zigzag task) with a load. You will be required to complete all phases of the test in sequence.

You must report to the test site at the scheduled time. You are required to bring personal protective equipment to wear during the test including as a minimum: hard hat, work boots, and suitable work clothing.

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 Task 1, Task 3 and Task 4 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 twice 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 manuals and load charts 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 load. You will also watch a short video showing all the tasks you will be required to perform during the examination.

### *Note that:*

- The crane's LMI system (if the crane is so equipped) has been correctly programmed and will not interfere with the proper operation of the crane.
- The crane has been set up and leveled. A spirit level is available if you wish to verify level.
- None of the target points or barrels has been placed at a radius that exceeds the crane's rated capacity.
- On telescopic boom cranes, the boom length has been pre-set. You will **NOT** be permitted to telescope at any time.
- All hand signals used throughout the test will be in accordance with ASME B30.5.

## 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 the following:**

- Dropping the ball or Test Weight (on ground, in barrel, etc.);
- Two blocking of the crane;
- Uncontrolled or reckless operation;

- Failure to respond to a “Stop” signal;
- Any action that in the judgment of the Examiner could endanger personnel or equipment at the test site.

The Examiner has the authority to stop the test at any time for reasons of safety or if the Examiner determines the candidate is attempting to circumvent any task. Please ask the Examiner or proctor if you have questions.

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

### **CANDIDATE ID AND SIGNATURE**

Prior to entering the cab, 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/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, except for Task 4, when you will go back to the beginning of either Task 4a or 4b, as appropriate.
- You will also be entitled to a Pre-Test or Pre- Task 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.

### **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 will be allowed to “get the feel” of the controls and run the crane through its functions with the exclusion of telescoping. 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 or the barrels.
- You must finish the Pre-test Familiarization Period with the ball under control in the Start Circle within the 15 minute period.
- The Examiner will notify you when there are 10, 5 and 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.

### **TASK 1: PLACE BALL IN STOP CIRCLE**

*Optimum Time — 1 minute and 30 seconds.*

- At the Examiner’s indication to start (at which point timing will begin) raise the ball and chain at least 10 ft. off the ground to clear all obstacles and personnel.
- Bring it from its starting position in the Start Circle to the Stop Circle.
- Once the ball reaches the Stop Circle place it there such that the chain suspended from the hook makes contact with the ground inside the circle and remains there.
- The Examiner will give you a stop signal once the ball and chain are under control.

- Points will be deducted for the following:
  - Dragging or contact of chain outside of the circle.
  - Hook or ball touching ground either inside or outside of the circle.
  - Hook or ball contacting any part of the course or crane.

## **TASK 2: FOLLOW HAND SIGNALS**

*This task is not timed.*

- At the Examiner's indication to start, bring the ball and chain from the Stop Circle to the Designated Area.
- You will be asked to respond to three standard B30.5 hand signals given by the Examiner.
- The Examiner's signals will be:
  - Lower the boom and raise the load, and stop;
  - Swing, and stop;
  - Lower the load slowly, and stop.
- The Examiner may give the signals in any sequence.
- At the Examiner's indication that this task is concluded, return the overhaul ball to the Start Circle.
- The Examiner or Proctor will remove the chain at this time.

## **TASK 3: PLACE BALL IN BARRELS**

*Optimum Time:*

*Small Telescopic Crane — three and one-half (3½) minutes.*

*Large Telescopic Crane — three and one-half (3½) minutes.*

*Lattice Boom Crane — four (4) minutes.*

- At the Examiner's indication to start (at which point timing will begin), bring the overhaul ball from the Start Circle and place it into Barrel #1. (If you knock over Barrel #1, at the Examiner's indication, proceed to try and put the ball in Barrel #2.)
- The Examiner will determine when the horizontal white line painted around the center of the ball has dropped below the rim of Barrel #1, and will so indicate to you.
- At the Examiner's indication, move the ball from Barrel #1 to Barrel #2.
- The Examiner will determine when the horizontal white line painted around the

center of the ball has dropped below the rim of the barrel. Hold the ball in Barrel #2 until instructed by the Examiner to remove it.

- Timing shall stop when the ball is completely clear of Barrel #2 and the Examiner has given you a stop signal.
- Points will be deducted for the following:
  - Moving barrel (2 ins. or more)
  - Knocking over barrel
  - Hook or ball touching ground

## **PRE-TASK FAMILIARIZATION PERIOD (WITH TEST WEIGHT)**

*This part of the Test is not scored.*

- At the Examiner's indication, bring the overhaul ball over the Test Weight located in the Test Weight Circle.
- The load will be attached to the crane's hook by the Examiner or Proctor.
- You are allowed to bring the Test Weight to the designated area where you can get the feel of the load, test the brake, etc. before beginning the zigzag corridor task.
- You may not swing the load outside of the designated area or shadow the zigzag course.
- You will be allowed a maximum of five (5) minutes for this Pre-Task Familiarization, by the end of which period, you must have placed the Test Weight on the ground in the Test Weight Circle with the rigging taut.
- The Examiner will notify you when there is one (1) minute remaining.

## **TASK 4: NEGOTIATE ZIGZAG CORRIDOR WITH LOAD**

*Optimum Time:*

*Small Telescopic Crane — four (4) minutes each direction.*

*Lattice Boom Crane — three (3) minutes each direction.*

*Large Telescopic Crane — three (3) minutes each direction.*

This task is divided into two tasks 4A and 4B. 4A requires you to go through the corridor in a forward direction. 4B requires you to go through the corridor in a reverse direction. (This is the only task in which the time allowed differs depending on the crane type you are operating.)

- At the Examiner's direction to start (at which point timing will begin), lift the Test Weight into the air and swing, boom up or down, hoist up or down as you judge necessary to guide the load through the zigzag corridor without touching the ground with the Test Weight, or raising the Test Weight so high that the chain leaves the ground, or touching or knocking over any part of the PVC barrier. Points will be deducted for the following:
  - Knocking ball off pole
  - Moving pole base off line
  - Knocking pole over
  - Chain leaving ground
  - Load touching ground
- Timing will stop when you have placed the Test Weight on the ground in the Stop Circle and the Examiner has given you a stop signal. Task is not complete until the load is placed completely within the outside perimeter of the circle and the Examiner has given you a stop signal. If the Examiner does not give you a stop signal, this will indicate the weight is not within the circle and the task continues to be timed.
- At this time the Examiner will reconstruct the corridor as necessary.
- At the direction of the Examiner, at which point timing will begin, lift the Test Weight from the Stop Circle and travel through the corridor in reverse fashion.
- Timing will stop when you have placed the Test Weight on the ground in the Test Weight circle and the Examiner has given you a stop signal. Task is not complete until the load is placed completely within the outside perimeter of the circle and the Examiner has given you a stop signal. If the Examiner does not give you a stop signal, this will indicate the weight is not within the circle and the task continues to be timed.
- The Proctor will then detach the Test Weight from the overhaul ball hook.
- At the Examiner's direction, swing the hook to the Start Circle and allow the Examiner to attach the chain in readiness for the next candidate. Remain in the cab until the Examiner gives you a clear indication that you may leave the cab. Set the swing brake and lock before leaving the cab.

## **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.



## Candidate Application Forms

*Please photocopy all sides of the following forms for your use in applying for the CCO Written and Practical Examinations.*

**Candidate Application — Written Examination**  
**Physical Examination Form**  
**Physician Instructions for Medical Examination**  
**Candidate Application — Practical Examination**  
**Change of Address Form**

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# CANDIDATE APPLICATION

## WRITTEN EXAMINATION — MOBILE CRANES

Please type or print neatly.

PAGE 1 OF 2

NAME <small>First</small> _____ <small>Middle</small> _____ <small>Last</small> _____		
CCO CERTIFICATION NUMBER <small>(If previously certified)</small> _____	SOCIAL SECURITY # _____	
STREET ADDRESS _____		DATE OF BIRTH _____
CITY _____	STATE _____	ZIP _____
PHONE _____	FAX _____	E-MAIL _____
COMPANY / ORGANIZATION _____		PHONE _____
COMPANY STREET ADDRESS _____		
CITY _____	STATE _____	ZIP _____
ARE YOU A MOBILE CRANE RETEST CANDIDATE? <input type="checkbox"/> NO <input type="checkbox"/> YES    Date last tested: ____ / ____ / ____		

### WRITTEN EXAMINATIONS FOR WHICH YOU ARE APPLYING

**BUBBLE IN** the circle next to the crane type(s) for which you are applying. **CHECK (✓)** the load chart you want to use for that crane type. **NOTE:** You must register for the Core exam and at least one Specialty examination, unless you are a retest candidate. **RETEST CANDIDATES** check **YES** above and follow the retest instructions below. (If you are recertifying, please use separate Recertification Application Form.) Also check (✓) the appropriate boxes below for correct fees.

#### EXAM DESCRIPTION

<input type="radio"/> Core Exam	652603	<b>LOAD CHARTS</b> <i>(Check one for each Specialty selected)</i>
<input type="radio"/> Lattice Boom Crawler:	652606	<input type="checkbox"/> American 5300
	652607	<input type="checkbox"/> Manitowoc 888 Series 2
<input type="radio"/> Lattice Boom Truck:	652609	<input type="checkbox"/> Link-Belt HC-238H
	652610	<input type="checkbox"/> Manitowoc 777T
<input type="radio"/> Large Telescopic: <i>(above 17.5 tons)</i>	652612	<input type="checkbox"/> Grove TMS 750B
	652613	<input type="checkbox"/> Link-Belt RTC-8050
<input type="radio"/> Small Telescopic: <i>(below 17.5 tons)</i>	652615	<input type="checkbox"/> Grove RT 59S
	652616	<input type="checkbox"/> Manitex M1768

#### EXAM FEES

Core Exam plus one (1) Specialty	\$165	<input type="checkbox"/>
Core Exam plus two (2) Specialties	\$175	<input type="checkbox"/>
Core Exam plus three (3) Specialties	\$185	<input type="checkbox"/>
Core Exam plus four (4) Specialties	\$195	<input type="checkbox"/>
<hr/>		
<b>RETEST CANDIDATE FEES ONLY</b>		
Core only for Retest Candidates	\$165	<input type="checkbox"/>
One (1) Specialty only – Core passed	\$ 65	<input type="checkbox"/>
Two (2) Specialties – Core passed	\$ 75	<input type="checkbox"/>
Three (3) Specialties – Core passed	\$ 85	<input type="checkbox"/>
Four (4) Specialties – Core passed	\$ 95	<input type="checkbox"/>
<hr/>		
Candidate Late Fee <i>(if applicable)</i> . . . . .	\$ 50	<input type="checkbox"/>
Incomplete Application Fee <i>(if applicable)</i>	\$ 30	<input type="checkbox"/>
<b>TOTAL AMOUNT ENCLOSED</b> . . . . .	<b>\$</b>	<input style="width: 80px; height: 20px;" type="text"/>





# PHYSICAL EXAMINATION FORM

PAGE 1 OF 2

**TO BE FILLED IN BY EXAMINING PHYSICIAN** (Please print)

DATE OF EXAMINATION

(Month / Day / Year) / /

OPERATOR'S NAME First

Middle

Last

SOCIAL SECURITY #

DATE OF BIRTH (Month / Day / Year)

AGE

HOME ADDRESS

PHONE

CITY

STATE

ZIP

## HEALTH HISTORY

- |                              |                             |                                                    |                              |                             |                                                 |                              |                             |                                                                           |
|------------------------------|-----------------------------|----------------------------------------------------|------------------------------|-----------------------------|-------------------------------------------------|------------------------------|-----------------------------|---------------------------------------------------------------------------|
| <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> Asthma                    | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> Muscular Disease       | <input type="checkbox"/> YES | <input type="checkbox"/> NO | <input type="checkbox"/> Head or spinal injuries                          |
| <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Kidney                    | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Psychiatric Disorder   | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Seizures, fits, convulsions or fainting          |
| <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Tuberculosis              | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Cardiovascular Disease | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Extensive confinement by illness or injury       |
| <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Diabetes                  | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Gastrointestinal Ulcer | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Any other nervous disorder                       |
| <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Nervous Stomach           | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Ethanol use            | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Suffering from any other disorder                |
| <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Rheumatic Fever           | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Rx drug use            | <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Permanent defect from illness, disease or injury |
| <input type="checkbox"/>     | <input type="checkbox"/>    | <input type="checkbox"/> Over the counter drug use |                              |                             |                                                 |                              |                             |                                                                           |

IF ANSWER TO ANY OF THE ABOVE IS YES, EXPLAIN:

\_\_\_\_\_

**GENERAL APPEARANCE AND DEVELOPMENT:**

Good

Fair

Poor

**VISION:**

For Distance:  Right/20

Left/20

Both/20

Without Corrective Lenses

With Corrective Lenses

Evidence of disease or injury: Right \_\_\_\_\_

Left \_\_\_\_\_

Color Test: \_\_\_\_\_

Horizontal Field of Vision: Right \_\_\_\_\_

Left \_\_\_\_\_

**HEARING:**

Right Ear \_\_\_\_\_

Left ear \_\_\_\_\_

Evidence of disease or injury: Right \_\_\_\_\_

Left \_\_\_\_\_

**AUDIOMETRIC TEST:**

Decibel loss at

500 HZ

1,000 Hz

2,000 Hz

3,000 Hz

4,000 Hz

5,000 Hz

6,000 Hz

7,000 Hz

8,000 Hz

**THROAT:**

\_\_\_\_\_

**THORAX:**

Heart: \_\_\_\_\_

If organic disease is present, is it fully compensated? \_\_\_\_\_

Blood Pressure: Systolic \_\_\_\_\_

Diastolic \_\_\_\_\_

Pulse: \_\_\_\_\_

Before Exercise \_\_\_\_\_

Immediately after \_\_\_\_\_

Lungs: \_\_\_\_\_

**ABDOMEN:**

Scars \_\_\_\_\_

Abdominal Masses \_\_\_\_\_

Tenderness \_\_\_\_\_

# PHYSICAL EXAMINATION FORM (CONT'D)

**HERNIA:**  Yes  No If so, where? \_\_\_\_\_ Is truss worn? \_\_\_\_\_

**GASTROINTESTINAL:** Ulceration or other disease? Yes \_\_\_\_\_ No \_\_\_\_\_

**GENITO-URINARY:** Scars: \_\_\_\_\_ Urinal Discharge: \_\_\_\_\_

**REFLEXES:** Rhomberg \_\_\_\_\_  
 Pupillary: \_\_\_\_\_ Light R \_\_\_\_\_ L \_\_\_\_\_  
 Accommodation: \_\_\_\_\_ R \_\_\_\_\_ L \_\_\_\_\_

**KNEE JERKS:** Right Normal \_\_\_\_\_ Increased \_\_\_\_\_ Absent \_\_\_\_\_  
 Left Normal \_\_\_\_\_ Increased \_\_\_\_\_ Absent \_\_\_\_\_

**REMARKS:** \_\_\_\_\_

**EXTREMITIES:** Upper \_\_\_\_\_ Lower \_\_\_\_\_ Spine \_\_\_\_\_  
**LABORATORY & OTHER SPECIAL FINDINGS:** Urine Spec. Gr. \_\_\_\_\_ Alb. \_\_\_\_\_ Sugar \_\_\_\_\_  
 Other Laboratory Data (Serology, etc.) \_\_\_\_\_  
 Radiological Data \_\_\_\_\_ Electrocardiograph \_\_\_\_\_

**GENERAL COMMENTS:** \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

NAME OF EXAMINING DOCTOR (PLEASE PRINT) \_\_\_\_\_ SIGNATURE \_\_\_\_\_  
 ADDRESS OF EXAMINING DOCTOR \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_

**MEDICAL EXAMINER'S CERTIFICATE TO BE COMPLETED ONLY IF OPERATOR IS FOUND QUALIFIED**

**MEDICAL EXAMINER'S CERTIFICATE**  
 I certify that I have examined \_\_\_\_\_  
CRANE OPERATOR'S NAME (PRINT)  
**with the knowledge of his/her duties,**  
**I find him/her qualified under the regulations.**

Qualified only when wearing corrective lenses.  
 Qualified only when wearing a hearing aid.  
 Qualified — see Accommodation Statement attached.

A complete examination form for this person is on file in my office:

ADDRESS \_\_\_\_\_  
 DATE OF EXAMINATION \_\_\_\_\_ NAME OF EXAMINING DOCTOR \_\_\_\_\_  
 SIGNATURE OF EXAMINING DOCTOR \_\_\_\_\_  
 SIGNATURE OF OPERATOR \_\_\_\_\_  
 ADDRESS OF OPERATOR \_\_\_\_\_

**MEDICAL EXAMINER'S CERTIFICATE**  
 I certify that I have examined \_\_\_\_\_  
CRANE OPERATOR'S NAME (PRINT)  
**with the knowledge of his/her duties,**  
**I find him/her qualified under the regulations.**

Qualified only when wearing corrective lenses.  
 Qualified only when wearing a hearing aid.  
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ADDRESS \_\_\_\_\_  
 DATE OF EXAMINATION \_\_\_\_\_ NAME OF EXAMINING DOCTOR \_\_\_\_\_  
 SIGNATURE OF EXAMINING DOCTOR \_\_\_\_\_  
 SIGNATURE OF OPERATOR \_\_\_\_\_  
 ADDRESS OF OPERATOR \_\_\_\_\_



# PHYSICIAN INSTRUCTIONS

## FOR MEDICAL EXAMINATION

*Please give these instructions to the Examining Physician.*

### PHYSICAL QUALIFICATIONS AND EXAMINATIONS OF CRANE OPERATORS

A person is physically qualified to operate a crane if that person:

1. Has no loss of a foot, a leg, a hand, or an arm, or has been granted a waiver;
2. Has no impairment of the use of a foot, a leg, a hand, fingers, or an arm, and no other structural defect or limitation, which is likely to interfere with his/her ability to control and safely operate a crane or has been granted a waiver upon a determination that the impairment will not interfere with his/her ability to control and safely operate a crane;
3. Has no established medical history or clinical diagnosis of diabetes mellitus currently requiring insulin for control;
4. Has no current clinical diagnosis of myocardial infarction, angina pectoris, coronary insufficiency, thrombosis, or any other cardiovascular disease of a variety to be known accompanied by syncope, dyspnea, collapse or congestive cardiac failure;
5. Has no established medical history or clinical diagnosis of respiratory dysfunction likely to interfere with his/her ability to control and operate a crane safely;
6. Has no current clinical diagnosis of high blood pressure likely to interfere with his/her ability to operate a crane;
7. Has no established medical history or clinical diagnosis of rheumatic, arthritic, orthopedic, muscular, neuromuscular, or vascular disease which interferes with his/her ability to control and operate a crane safely;
8. Has no established medical history or clinical diagnosis of epilepsy or any other condition which is likely to cause loss of consciousness or any loss of ability to control a crane;
9. Has no mental, nervous, organic or functional disease or psychiatric disorder likely to interfere with his/her ability to operate a crane;
10. Has distant visual acuity of at least 20/40 (Snellen) in each eye without corrective lenses or visual acuity separately corrected to 20/40 (Snellen) or better with corrective lenses, distant binocular acuity of at least 20/40 (Snellen) in both eyes with or without corrective lenses, field of vision of at least 70 degrees in the horizontal meridian in each eye, and the ability to recognize the colors of traffic signals and devices showing standard red, green, and amber;
11. When tested by use of an audiometric device, does not have an average hearing loss in the better ear greater than 40 decibels at 500 Hz, 1,000 Hz, 2,000 Hz, 3,000 Hz and 4,000 Hz with or without a hearing aid when the audiometric device is calibrated to American National Standard (formerly ASA Standard) Z24.5-1951;
12. Does not use a prescribed or over the counter substance, including ethanol, which would impair the operator to perform safe operation of a crane. These include illegal drugs, controlled substances (including trace amounts), look-alike drugs, designer drugs, or any other substance which may have the effect on the human body of being a narcotic, depressant, stimulant or hallucinogen. An exception to this ruling is that an operator may use such a substance or drug if the substance or drug 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 that the prescribed substance or drug will not adversely affect the operator's ability to safely operate a crane. The treating physician will also provide a waiver for the Medical Examiner. (See waiver statement.)

### INSTRUCTIONS FOR PERFORMING AND RECORDING PHYSICAL EXAMINATIONS

The examining physician should review these instructions before performing the physical examination. Answer each question yes or no where appropriate.

The examining physician should be aware of the rigorous physical demands and mental and emotional responsibilities placed on the operator of cranes. In the interest of public safety the examining physician is required to certify that the operator does not have any physical, mental, or organic defect of such a nature as to affect the operator's ability to operate safely a crane.

**General Information.** The purpose of this history and physical examination is to detect the presence of physical, mental or organic defects of such a character and extent as to affect the applicant's ability to operate a crane safely. The examination should be made carefully and at least as complete as indicated by the attached form. History of certain defects may be cause for rejection or indicate the need for making certain laboratory tests or a further, and more stringent, examination. Defects may be recorded which do not, because of their character or degree, indicate that certification of physical fitness should be denied. However, these defects should be discussed with the applicant and he/she should be advised to take the necessary steps to ensure correction, particularly of those which, if neglected, might lead to a condition likely to affect his/her ability to operate safely.

**General Appearance and development.** Not marked overweight. Not any posture defect, perceptible limp, tremor, or other defects that might be caused by alcoholism, thyroid intoxication, or other illnesses including sedating or habit forming drugs.

**Head-eyes.** When other than the Snellen chart is used, the results of such test must be expressed in values comparable to the standard Snellen test. If the applicant wears corrective lenses, these should be worn while applicant's visual acuity is being tested. If appropriate, indicate on the Medical Examiner's Certificate by checking the box "Qualified only when wearing corrective lenses." In recording distance vision use 20 feet as normal. Report all vision as a fraction with 20 as a numerator and the smallest type read at 20 feet as denominator. Note ptosis, discharge, visual fields, ocular muscle imbalance, color blindness, corneal scar, exophthalmos, or strabismus, uncorrected by corrective lenses.

Contact lens wear may not be allowed in many work areas where mandatory eye protection disallows contact lens wear. The applicant must be made aware that safety glass eye wear may routinely be required at job sites and must also pass vision testing protocols with safety eye glasses specified and approved ANSI Z89.

**Ears.** Note evidence of mastoid of middle ear disease, discharge, symptoms of aura vertigo, or Meniere's Syndrome. When recording hearing an audiometer is used to test hearing. Record decibel loss at 500 Hz, 1,000 Hz, 2,000 Hz, 3,000 Hz, and 4,000 Hz.

**Throat.** Note evidence of disease, irremediable deformities of the throat likely to interfere with eating or breathing, or any laryngeal condition which could interfere with the safe operation of a crane.

## PHYSICIAN INSTRUCTIONS (CONT'D)

### FOR MEDICAL EXAMINATION

**Thorax-heart.** Stethoscopic examination is required. Note murmurs and arhythmias, and any past or present history of cardiovascular disease, of a variety known to be accompanied by syncope, dyspnea, collapse, enlarged heart or congestive heart failures. Electrocardiogram is required when findings so indicate.

**Blood Pressure.** Record with either spring or mercury column type of sphygmomanometer. If the blood pressure is consistently above 160/90mm. Hg., further tests may be necessary to determine whether the operator is qualified to operate a crane.

**Lungs.** If any lung disease is detected, state whether active or arrested; if arrested, your opinion as to how long it has been quiescent.

**Gastrointestinal system.** Note any diseases of the gastrointestinal system.

**Abdomen.** Note wounds, injuries, scars, or weakness of muscles of abdominal walls sufficient to interfere with normal function. Any hernia should be noted if present. State how long and if adequately contained by truss.

**Abnormal masses.** If present, note location, if tender, and whether or not applicant knows how long they have been present. If the diagnosis suggests that the condition might interfere with the control and safe operation of a crane, more stringent tests must be made before the applicant can be certified.

**Genito-urinary.** Urinalysis is required. Acute infections of the genito-urinary tract, as defined by local and State public health laws, indications from urinalysis of uncontrolled diabetes, symptomatic albuminuria in the urine, or other findings indicative of health conditions likely to interfere with the control and safe operation of a crane will disqualify an applicant from operating a crane.

**Neurological.** If positive Rhomberg is reported, indicate degrees of impairment. Pupillary reflexes should be reported for both light and accommodation.

Knee jerks are to be reported absent only when not obtainable upon reinforcement and as increased when foot is actually lifted from the floor following a light blow on the patella, sensory vibratory and positional abnormalities should be noted.

**Extremities.** Carefully examine upper and lower extremities. Record the loss or impairment of a leg, foot, toe, arm, hand, or fingers. Note any and all deformities, the presence of atrophy, semiparalysis or paralysis, or varicose veins. If a hand or finger deformity exists, determine whether sufficient grasp is present to enable the operator to secure and maintain a grip on the controls. If a leg deformity exists, determine whether sufficient mobility and strength exists to enable the operator to operate pedals properly. Particular attention should be given to, and a record should be made of, any impairment or structural defect which may interfere with the operator's ability to operate a crane safely.

**Spine.** Note deformities, limitation of motion, or any history of pain, injuries, or disease, past or presently experienced in the cervical or lumbar spine region. If findings so dictate, radiologic and other examinations should be used to diagnose congenital or acquired defects; or spondylolisthesis and scoliosis.

**Recto-genital studies.** Diseases or conditions causing discomfort should be evaluated carefully to determine the extent to which the condition might be handicapping while lifting, pulling, or during periods of prolonged operation that might be necessary as part of the operator's duties.

**Laboratory and other special findings.** Urinalysis is required, as well as such other tests as the medical history or findings upon physical examination may indicate are necessary. A serological test is required if the applicant has a history of luetic infection or present physical findings indicate the possibility of latent syphilis. Other studies deemed advisable may be ordered by the examining physician.

**Diabetes.** If insulin is necessary to control a diabetic condition, the operator is not qualified to operate a crane. If mild diabetes is noted at the time of examination and it is stabilized by use of a hypoglycemic drug and a diet that can be obtained while the operator is on duty, it should not be considered disqualifying. However, the operator must remain under adequate medical supervision.

**General.** The physician must date and sign his findings upon completion of the examination.

The medical examination shall be performed by a licensed doctor of medicine or osteopathy. A licensed ophthalmologist or optometrist may perform examinations pertaining to visual acuity, field of vision and ability to recognize colors.

If the medical examiner finds that the person he/she examined is physically qualified to operate a crane, the medical examiner shall complete the Medical Examiner's Certificate and furnish one copy to the person examined and one copy to the employer.

The medical examiner must attach all treating physician, ophthalmologist, or optometrist medical information pertaining to the applicant. Waiver acceptance is up to the medical examiner when waiver is attached to applicant application. The medical examiner is expected to verify the waiver provided by treating physician and qualify or disqualify applicant because of his examination of the applicant.

The medical examiner is expected to perform testing as needed of all applicants and may submit an accommodation statement if applicable about applicants' physical limitations to aid an employer with ADA guidelines. Any accommodation statements must be attached to medical artifaction.

**Waiver by physician.** Treating physicians must provide signed statements disclosing disease state and/or medication and that the applicant is qualified for the practical examination, and state, "I have examined the aforementioned crane operator applicant and within medical certainty I find the applicant at no greater risk than the general population as a result of any physical, mental, or organic defects, and can safely operate a crane with the aforementioned diagnosis and treatment regimen subject to passing the CCO practical examination."



# CANDIDATE APPLICATION

## PRACTICAL EXAMINATION — MOBILE CRANES

Please type or print neatly.

PAGE 1 OF 2

NAME <small>First</small>			<small>Middle</small>			<small>Last</small>		
CCO CERTIFICATION NUMBER <small>(If previously certified)</small>				SOCIAL SECURITY #				
STREET ADDRESS						DATE OF BIRTH		
CITY				STATE		ZIP		
PHONE			FAX			E-MAIL		
COMPANY / ORGANIZATION					PHONE			
COMPANY STREET ADDRESS								
CITY				STATE		ZIP		
ARE YOU A RECERTIFICATION CANDIDATE? <input type="checkbox"/> NO <input type="checkbox"/> YES								

A candidate may take the practical examination only in those categories that he/she has passed on the written examination. Indicate with a checkmark the crane type(s) you wish to be tested on and the date you passed the corresponding written examination. **You must also provide a copy of either a score report, certificate, or certification card.**

### PRACTICAL EXAM

- Lattice Boom
- Large Telescopic (above 17.5 tons)
- Small Telescopic (below 17.5 tons)

### WRITTEN EXAM

- Lattice Boom Crawler  
and/or  
Lattice Boom Truck
- Large Telescopic (above 17.5 tons)
- Small Telescopic (below 17.5 tons)

Date on which you passed the written exam

_____ / _____ / _____
_____ / _____ / _____
_____ / _____ / _____
_____ / _____ / _____

### TEST SITE AT WHICH YOU INTEND TO TAKE THE PRACTICAL EXAMINATION

TEST SITE COORDINATOR NAME		
PHONE	FAX	E-MAIL
TEST SITE STREET ADDRESS		
CITY	STATE	ZIP
SCHEDULED DATE OF PRACTICAL EXAMINATION <small>(If known)</small>		

**Under penalties of perjury, I declare that the foregoing statements and those in any required accompanying documentation are true. I hereby consent to CCO's release of any information regarding this application and my examination administration to third parties as more fully described in the "Information Release Policy" in the CCO Candidate Handbook. I further acknowledge, I am physically and mentally fit to participate in this CCO Practical Examination program. In the event of any accident or injury, I will indemnify and hold harmless from all liability, loss, or damage CCO, International Assessment Institute, and the site owner/sponsor and/or any affiliate thereof, and/or any owners, directors, officers, employees or agents of these organizations.**

CANDIDATE SIGNATURE	DATE
---------------------	------





# CANDIDATE RECERTIFICATION APPLICATION

## WRITTEN EXAMINATION — MOBILE CRANES

Please type or print neatly.

PAGE 1 OF 2

NAME <small>First</small>			<small>Middle</small>			<small>Last</small>		
CCO CERTIFICATION NUMBER				SOCIAL SECURITY #				
STREET ADDRESS								
CITY						STATE		ZIP
PHONE			FAX			E-MAIL		
COMPANY / ORGANIZATION						PHONE		
COMPANY STREET ADDRESS								
CITY						STATE		ZIP

Have you taken the Practical Examination?  NO  YES WHEN?

### WRITTEN EXAMINATIONS FOR WHICH YOU ARE APPLYING

This application is for the purpose of recertification. You may **ONLY** recertify in the Specialty(s) in which you are currently certified. **BUBBLE IN** the circle next to the categories in which you are applying for recertification. If you would like to take additional Specialties in which you are not currently certified, **BUBBLE IN** the specialty(s) of your choice and **CHECK (✓)** the load chart you want to use for that crane type. *You must also provide a copy of either a score report, certificate, or certification card.*

#### EXAMINATIONS

RECERTIFICATION EXAM	LOAD CHARTS
<input type="radio"/> Core Exam	
<input type="radio"/> Lattice Boom Crawler	Manitowoc 888
<input type="radio"/> Lattice Boom Truck	Link-Belt HC-238H
<input type="radio"/> Large Telescopic <i>(above 17.5 tons)</i>	Grove TMS 750B
<input type="radio"/> Small Telescopic <i>(below 17.5 tons)</i>	Grove RT 59S
ADDITIONAL SPECIALTIES	LOAD CHARTS <i>(Check one for each Specialty selected)</i>
<input type="radio"/> Lattice Boom Crawler: 652606	<input type="checkbox"/> American 5300
652607	<input type="checkbox"/> Manitowoc 888 Series 2
<input type="radio"/> Lattice Boom Truck: 652609	<input type="checkbox"/> Link-Belt HC-238H
652610	<input type="checkbox"/> Manitowoc 777T
<input type="radio"/> Large Telescopic: 652612	<input type="checkbox"/> Grove TMS 750B
<i>(above 17.5 tons)</i> 652613	<input type="checkbox"/> Link-Belt RTC-8050
<input type="radio"/> Small Telescopic: 652615	<input type="checkbox"/> Grove RT 59S
<i>(below 17.5 tons)</i> 652616	<input type="checkbox"/> Manitex M1768

#### FEES

RECERTIFICATION EXAM FEES	
Core Exam plus one (1) Specialty	\$150 <input type="checkbox"/>
Core Exam plus two (2) Specialties	\$155 <input type="checkbox"/>
Core Exam plus three (3) Specialties	\$160 <input type="checkbox"/>
Core Exam plus four (4) Specialties	\$165 <input type="checkbox"/>
RECERTIFICATION RETEST FEES	
<i>Core only for Retest Candidates</i>	\$150 <input type="checkbox"/>
<i>One (1) Specialty only – Core passed</i>	\$ 50 <input type="checkbox"/>
<i>Two (2) Specialties – Core passed</i>	\$ 55 <input type="checkbox"/>
<i>Three (3) Specialties – Core passed</i>	\$ 60 <input type="checkbox"/>
<i>Four (4) Specialties – Core passed</i>	\$ 65 <input type="checkbox"/>
ADDITIONAL SPECIALTY EXAM FEES	
<i>(ONLY for candidates adding Specialties to existing certification)</i>	
One (1) Specialty only	\$65 <input type="checkbox"/>
Two (2) Specialties	\$75 <input type="checkbox"/>
Three (3) Specialties	\$85 <input type="checkbox"/>
Candidate Late Fee <i>(if applicable)</i> . . . . .	\$50 <input type="checkbox"/>
Incomplete Application Fee <i>(if applicable)</i>	\$30 <input type="checkbox"/>
TOTAL AMOUNT ENCLOSED . . . . .	\$ <span style="border: 1px solid black; display: inline-block; width: 80px; height: 20px; vertical-align: middle;"></span>





# CHANGE OF ADDRESS FORM

Please use this form to advise of any changes of address. Please mail or fax this to:  
International Assessment Institute (IAI)  
600 Cleveland Street, Suite 900  
Clearwater, Florida 33755

Phone: 727-449-8525  
Fax: 727-461-2746

**Please type or print neatly.**

NAME <i>First</i>			<i>Middle</i>			<i>Last</i>		
CCO CERTIFICATION NUMBER				SOCIAL SECURITY #				

## OLD ADDRESS

STREET ADDRESS								
CITY					STATE		ZIP	
PHONE			FAX			E-MAIL		
COMPANY / ORGANIZATION					PHONE			
COMPANY STREET ADDRESS								
CITY					STATE		ZIP	

## NEW ADDRESS

STREET ADDRESS								
CITY					STATE		ZIP	
PHONE			FAX			E-MAIL		
COMPANY / ORGANIZATION					PHONE			
COMPANY STREET ADDRESS								
CITY					STATE		ZIP	

## EFFECTIVE DATE OF CHANGE

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## IMPORTANT CONTACT INFORMATION



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

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

Phone: 703-560-2391

Fax: 703-560-2392

E-Mail: [info@nccco.org](mailto:info@nccco.org)



### **INTERNATIONAL ASSESSMENT INSTITUTE**

#### **Attention: CCO Testing**

600 Cleveland Street, Suite 900  
Clearwater, Florida 33755

Phone: 727-449-8525

Fax: 727-461-2746



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