Boom Truck crane test

General Examination:

All candidates for a certificate of competence must pass a general written examination prior to taking the practical test. All applications must be received by the License & Certification unit one month prior to the exam date.

The general exam is administered by the New York State Department of Labor at Department of Labor sites. The general tests are typically held in January, May and October. All correspondence related to the test is conducted through the License & Certificate Unit.

The test consists of 60 multiple choice questions. The exam consists of 60 multiple choice questions. The test includes questions related to:

- the ability to understand and use the components of load charts and use of range diagrams;
- recognition and avoidance of site hazards and proper crane set up;
- operations: a very broad category related to how to safely operate a crane;
- general technical knowledge such as but not limited to inspections, wire rope, rigging, electrical hazards, crane terms and basics of machine power flow systems; and
- certification requirements.

Reference sources include:

- New York State Code Rule 23-8 "Mobile Cranes, Towers & Derricks;"
- OSHA Crane Standard 1926.550, and Rigging Standard 1926.251, web address www.osha.gov;
- ASME 30.5, web address www.asme.org;
- the Construction Safety Association of Ontario, web address www.csao.org, has a handbook on cranes and one on rigging;
- there are also other crane reference sources found on the web that sell crane and rigging manuals.

Administration:

The practical test is administered by the NYS Department of Labor (DOL), Division of Safety & Health, Industry Inspection Bureau. Hand signals during the test are furnished by DOL Safety & Health Inspectors. All tests are video recorded by DOL employees with equipment owned by DOL.

Members of the DOL Crane Examining Board judge and score all tests. The Board members are appointed by the Commissioner of Labor and represent the DOL in their duties as Crane Examining Board members.

The test site facilities, equipment and support staff are provided voluntarily by the hosting organization. The facilities and equipment meet all requirements. Neither the hosting organizations nor their employees have any say or input into the administration of the test or its results.

Identification:

All candidates must present government photo identification and sign the roster in the presence of the administrator at the start of the test day.

Familiarization:

When the candidate is sent a notice to appear for the test, directions are included to call the License & Certificate Unit to arrange for 20 minute familiarization session at a time and date a few days prior to the test date as specified by the L&C Unit. Those choosing to forgo the 20 minute session will be allowed 5 minutes before testing commences the day of the test.

Orientation:

On the day of the test, all candidates will receive orientation regarding the tasks that have to be performed, as well as requirements and procedures prior to the test from an administrator from the NYS Department of Labor. Any questions related to the test will be answered at that time.

Video Recording:

The test starts with the candidate approaching the camera and stating one's name, test number, date, and time.

Inspection:

The candidate then proceeds to the crane, where they are to first inspect the crane, rigging and terrain just as would be done at the beginning of the work shift, then proceed to the operator seat to begin the operation of the crane.

Format hydraulic crane test:

The test involves four separate tasks: the platform, traffic cone corridor, pole, and drum. A tire or set of tires is attached for the platform, corridor, and pole. An empty hook & ball are used for the drum. The boom angle indicator will be covered.

Platform:

With the tire(s) attached, the candidate is signaled to raise the load and to swing it 180 degrees to place the tire(s) onto the platform. The goal is to control the load while traveling and place the load gently on the center of the platform. Once the load is placed on the platform, the signal to slacken the cable will be given. The time allowance for the task is 1.5 minutes.

Traffic cone corridor:

This task consists of two rows of traffic cones, parallel to each other, on a curve, offset to the crane. The candidate is signaled to place the tire(s) down at the start of the corridor. Next the signal is given to raise the load 6 to 12 inches above the ground. A signal is then given to boom through the corridor while keeping the load stable, between the cones. The base of the tire(s) must be below the top of the cones, not touch the ground, and not hit or go outside of the cones. It is necessary to do more than one function at a time, such as: boom down, raise the load and swing the boom. The time allowance for the task is 1.5 minutes.

Pole:

With the tire(s) attached, the candidate is signaled to raise the load and to swing it 180 degrees to above the top of the pole and lower the tire(s) over the pole, without using the pole to stabilize the load. The time allowance for the task is 1.5 minutes.

Drum:

The candidate is signaled to hoist the empty hook and swing it 180 degrees to above the open 55 gallon drum, and place the ball into the drum. The time allowance for the task is 1.5 minutes.

Completion:

If a task is not completed within the allotted time, the Crane Board sounds the horn once and the candidate is signaled to stop and then to go on to the next task.

The Crane Board will sound the horn twice if they want the test stopped following an unsafe act and the candidate removed from the crane. If this happens, the signal person will have the candidate lower the load to the ground and dog off the crane. The certified operator on the crane returns the crane to the start location.

Upon completion of the entire test, the candidate is signaled to swing the crane back to the starting point and given the signal to dog off the crane.

Upon leaving the crane, the candidate returns to the camera and gives the same information as at the start of the test.

Causes for immediate failure and removal from the crane:

Loss of control of the load
Striking something with the load
Dropping the load on the ground
Placing the load on the ground to regain control
Failure to follow hand signals
Failure of the first three tasks
Other unsafe act

Scoring:

Candidates are scored on how well each task is performed. Smoothness of travel, time taken to complete the task, and skill shown in accurately placing the load or maneuvering through the traffic cones are very important factors in the score for each task. How well one performs the various tasks and how one transitions from the end of one task to the start of another reflects upon how the candidate will be scored on various elements of the overall operation: raising and lowering of the load, raising and lowering of the boom and load, swing and overall smoothness of operations.

A final score of 65 or better is required to pass. Each Crane Board member at the test completes a score sheet and recommends passing or failing. To obtain the final score, the License and Certification Unit adds the scores given by each of the Board members for the individual tested and then divides that number by the number of Board members who did the grading. For example: 69 + 70 + 71 = 210. 210 divided by 3 = 70, which is a passing score. 63 + 64 + 65 = 192. 192 divided by 3 = 64, which is a failing score. Any unsafe act listed in the previous section will result in failure.