HOW TO PREPARE FOR THE LEVEL A CRANESAFE CERTIFICATION ASSESSMENT

6 February 2019

Assess Yourself First

Prepare for your assessment! Our website contains all the information you need for a successful assessment. Our goal is to find you competent on the assessment. We want you to be as prepared as possible for the assessment so that your chances of success are greatest.

In our experience the part of the assessment people find most challenging is the load chart and rigging calculation exercises. Use these practise exercises to help you get ready for the assessment. **www.fulford.ca/crane/cs_pex.html**

Learn more about the core skills & knowledge for all crane types as well as competency guides for each type of crane that give you more background on the competencies we are assessing against. **www.fulford.ca/crane/crane_comp.html**

Please use this information to get yourself ready for a successful assessment.

What does the Assessment Include

The assessment has three main parts and is designed to allow you to demonstrate your skill and knowledge of safe craning.

The assessment takes between 2 – 2½ hours (3 – 3½ hours for Lattice Friction Cranes).

Results will be mailed to you within one week and, if found competent, you will receive your certificate.

Part 1 **Hand Signals**

Part 2 **Load Chart & Rigging**

Part 3 **On-Crane Practical Assessment**

A. Pre-Operational
B. Crane Set Up & Hazard Assessment
C. Crane Operation

On-line Resources

Go to our website for more details and practice exercises.

What's Included in the Assessment
www.fulford.ca/crane/crane_asst.html

Load Chart & Rigging Practice Exercises
www.fulford.ca/crane/cs_pex.html

Core Skills & Knowledge
www.fulford.ca/crane/crane_comp.html

Log Book
www.fulford.ca/crane/pdf/cs_logbook.doc
www.fulford.ca/resources/resources-supplies.html

Hand Signals
www.fulford.ca/crane/pdf/cs_handsigs.pdf
www.fulford.ca/crane/pdf/cs_handsigs_tower.pdf

Tower Crane Handbook
www.fulford.ca/crane/pdf/csao_crane_handbook.pdf

Assessment Location & Fees
www.fulford.ca/crane/crane_assessdetails.html

If you are unable to access our website, please call our office and we will make other arrangements for you.

Employers

If you are an employer, please ensure that your crane operators are aware of what the assessment involves and have had the opportunity to review the practice exercises prior to their assessment.

Times to Complete the Level A Assessment

Assessment appointments typically require a total of 2 to 2½ hours of operator and machine time (between 3 and 3½ hours for Lattice Friction Crane). Operators must complete the load chart and rigging calculations section and the on-crane practical section within the following time limits:

Crane Type	Load Chart & Rigging Calculations	On-Crane Practical (With + Without Load)
Lattice Friction	90 minutes	15 + 15 (total 30 mins)
Hydraulic Friction	90 minutes	15 + 15 (total 30 mins)
Mobile Hydraulic	60 minutes	15 + 15 (total 30 mins)
Stiff Boom Truck	60 minutes	15 + 15 (total 30 mins)
Folding Boom Truck	45 minutes	10 + 10 (total 20 mins)
Tower	n/a	10 minutes
Self Erect Tower	45 minutes	20 minutes

Crane & Site Requirements

Please ensure that the crane being used for the assessment is out of storage and ready to be used when the Assessor arrives.

Crane must possess valid certification
The crane must have a valid inspection certificate. Failure to provide a valid certificate will result in the Assessor automatically terminating the Practical Portion of the Assessment. Additionally, if the assessor feels the crane is unsafe due to mechanical, electrical or hydraulic faults (which are not covered under Structural Certification inspection) the assessor will terminate the assessment. In either of these cases, the assessment fee will not be refunded and the cancellation policy applies.

Crane must be equipped with a log book
Occupational Health and Safety Regulations require all cranes to be equipped with an equipment log book. A sample log book is posted on our website: **www.fulford.ca/crane/cs_logbook.doc**. Fulford has developed coil-bound logbooks for all crane types and Canadian jurisdictions. **www.fulford.ca/resources/resources-supplies.html**

Load for assessment required on site
The Assessor will require a Load to be used with a minimum weight of 100 pounds and maximum weight of no more than 5% of the crane's maximum capacity, ideally with an engineered lift point (e.g. on a lock block, a cast in lifting bar versus a wire rope stranded loop). There are no restrictions on parts of line.

Location for the load chart and rigging calculations
This portion of the assessment requires a room where the operator can sit undisturbed to work through load chart and rigging calculation exercises. A lunch room or equivalent is fine so long as the operator will not be disturbed there; otherwise an office is a better choice. We provide all materials necessary for this portion of the assessment.

Location of on-crane assessment
The location for the on-crane assessment must be free of obstructions and should allow the crane to extend at least 75% of its maximum boom length in the case of hydraulic powered booms. Lattice Booms must have a minimum of 100 feet of boom rigged. Mobile Hydraulic Cranes and Boom Trucks must use a minimum of ¾ of the powered sections of the main boom.

Operator Requirements & Hand-Outs

To ensure the best chance of successfully completing the CraneSafe Level A assessment, crane operators need to be aware of what will take place during their assessment.

LOAD CHART & RIGGING EXERCISES
In particular, it is important to note that one section of the assessment is comprised of written calculations using load charts and rigging tables supplied by the assessor.
Practice Load Chart & Rigging Exercises are available on our website: **www.fulford.ca/crane/cs_pex.html**.
It is strongly recommended operators complete these practice exercises successfully in advance of the assessment.

Prior to assessment, all operators should read these documents:

- **How to Prepare for the CraneSafe Certification Assessment**
- **WorkSafe Regulations: Wire Rope, Rigging and Attachments** Operators should bring this document with them to their assessment to use as a reference.
- **Sample Target Layouts** for the On-Crane Practical portion of the assessment which must be completed with and without load.

Cancellation Policy

If you are unable to attend your appointment, you need to contact the office beforehand. Cancellation fees will apply. If you do not contact the office prior to the appointment ("No show") your application fee will be forfeited.

Cancellation & Rescheduling Fees

Over 15 days:	$100.00
8-15 days:	$275.00
2-7 days:	$500.00
48 hours or less:	$875.00

We understand that unforeseen events occur. If you must cancel or reschedule your assessment please give us as much notice as possible. We will make every effort to fill your appointment slot with another client. In more remote locations or very short notice we will unfortunately have to apply our cancellation policy to cover our costs.

Hoist Lines

15.25 Wire Rope Rejection Criteria

Wire rope must be permanently removed from service if

(a) in running wire ropes, there are 6 or more randomly distributed wires broken in one rope lay or 3 or more wires are broken in one strand in one lay,

(b) in stationary wire ropes, such as guylines, there are 3 or more broken wires in one lay in sections between end connections, or more than one broken wire within one lay of an end connection,

(c) wear, or the effects of corrosion, exceed ⅛ of the original diameter of outside individual wires,

(d) there is evidence of kinking, bird-caging or any other damage resulting in distortion of the rope structure,

(e) there is evidence of heat or arc damage, or

(f) there are reductions of normal rope diameter, from any cause, in excess of

  (i) 0.4 mm (1/64 in) for diameters up to and including 8 mm (5/16 in),

  (ii) 1 mm (3/64 in) for diameters greater than 8 mm (5/16 in) up to and including 19 mm (¾ in),

  (iii) 2 mm (1/16 in) for diameters greater than 19 mm (¾ in) up to and including 29 mm (1⅛ in), or

  (iv) 3 mm (3/32 in) for diameters greater than 29 mm (1⅛ in).

15.26 Non-Rotating Wire Rope

Wire rope with non-rotating construction must be removed from service if

(a) the rejection criteria in section 15.25 are met,

(b) there are 2 randomly distributed broken wires in 6 rope diameters, or

(c) there are 4 randomly distributed broken wires in 30 rope diameters.

15.15 Wraps Required

At least 2 full wraps of rope must remain on winding drums when the load hook is in the lowest position.

15.7 Wire Rope on Mobile Cranes

The minimum design factor based on breaking strength for wire rope on a mobile crane, unless otherwise specified by the crane or wire rope manufacturer, is

(a) for conventional wire rope

  (i) 2.5 for pendant lines, 3 for boom hoist reeving and 3.5 for load lines, during erection, and

  (ii) 3 for pendant lines, 3.5 for boom hoist reeving and 3.5 for load lines, at all times except during erection, and

(b) 5 for wire rope of non-rotating construction.

Blocks, Overhaul Balls, Hooks & Sheaves

15.17 Sheaves

A sheave must

(a) be correctly sized for the rope,

(b) have a device to retain the rope within the groove, and

(c) be removed from service if it has a damaged groove or flange.

15.10 Open Hook Restriction

(1) A hook must have a safety latch or other means that will retain slings, chains, or other similar parts, under slack conditions.

(2) A hook used in an application where manipulation of a safety latch or other retaining means may cause a hazard to a worker or where there is no hazard to a worker if the load becomes dislodged is exempt from the requirements of subsection (1).

15.29 Hook Rejection Criteria

A worn or damaged hook must be permanently removed from service if:

(a) the throat opening, measured at the narrowest point, has increased by more than 15% of the original opening,

(b) the hook has twisted more than 10° from the original plane of the hook,

(c) the hook has lost 10% or more of its cross-sectional area,

(d) the hook is cracked or otherwise defective, or

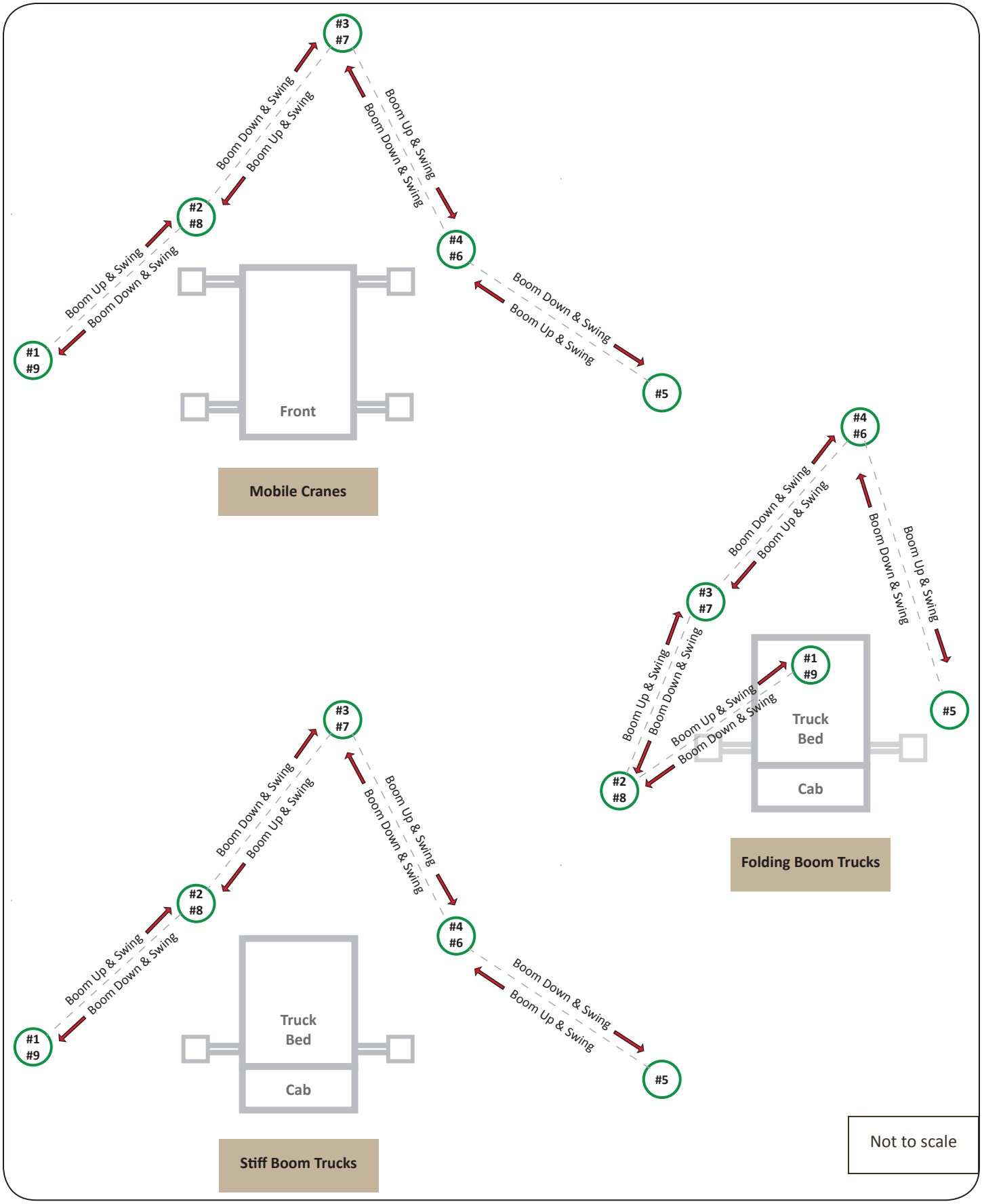
(e) wear or damage exceeds any criteria specified by the manufacturer.

Rigging Design Factors

Table 15-1: Minimum Design Factors for Rigging

Component	Min. Design Factor
Nylon fibre rope sling	5
Polyester rope sling	5
Polypropylene rope sling	5
Wire rope sling	5
Metal mesh sling	5
Synthetic web sling	5
Synthetic round sling	5
Wire rope sling fittings	5
Conventional wire rope	5
Non-rotating wire rope	as specified by manufacturer but not less than 5
Other fittings	as specified by manufacturer
Alloy steel chain sling	4
Chain fittings	4

(3) The design factor for any rigging assembly used to support workers must be at least 10.


#3
#7
#2
#8
#4
#6
#1
#9
#5
Boom Down & Swing
Boom Up & Swing
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Boom Down & Swing
Boom Down & Swing
Boom Up & Swing
Boom Up & Swing
Boom Down & Swing
Front
Mobile Cranes
#4
#6
#3
#7
#1
#9
#2
#8
#5
Truck
Bed
Cab
Folding Boom Trucks
#3
#7
#2
#8
#4
#6
#1
#9
#5
Truck
Bed
Cab
Stiff Boom Trucks
Not to scale

SAMPLE TARGET LAYOUT – TOWER CRANE