



The Development and Implementation of a Crane Operator Certification Scheme for British Columbia and the Yukon

– A Historical Summary

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1.0 Background

The British Columbia Association for Crane Safety (BCACS) was established in November 2005 with the mandate to develop and implement a certification scheme for crane operators. To do this, new standards of assessment and certification in the crane and hoisting industry needed to be developed.

A WorkSafeBC regulation was proclaimed on January 1, 2007 which required all crane operators in BC to hold a valid crane operator credential. On July 1, 2007 WorkSafeBC began to enforce the new regulation.

“We have worked extensively with crane industry stakeholders and we firmly believe we have developed a progressive, industry supported model and system for crane operators in BC,” said Fraser Cocks, Executive Director of BCACS (WorkSafe, 2007).

BCACS leadership used a collaborative approach to guide and establish the new certification scheme, which involved a working partnership with WorkSafeBC, Yukon Workers’ Compensation Board, the BC Industry Training Authority (ITA) and 52 members of the crane industry. These stakeholders spent three years developing an industry-driven crane operator certification system with an accompanying business model. This enabled BCACS to create a crane operator certification program that met safety, public, and industry needs as well as regional and national standards in Canada.

The newly formed BCACS had to overcome many political and economic challenges in the early stages, including a rapid increase in construction activity which meant a demand for crane operators. During the early stages of the boom, crane operators had not been required to have any formal training or experience.

With funding support from WorkSafeBC, BCACS led the development of BC crane operator standards across the full range of industry identified crane classifications. The Yukon, through the Yukon Workers’ Compensation Board, adopted the resulting crane operator certification scheme for crane operators in the Yukon Territory and reflected this in their regulation Part 5: Cranes, Hoisting and Lifting.

1.1 Risks and hazards addressed

Health and safety is a critical factor for any organization that operates in the crane and hoisting industry. The most common types of potential danger that operators encounter on the construction site include contacting high voltage power lines, cranes tipping over, booms bending due to overloading, material falling due to improperly secured loads or rigging, structural failure of the crane itself and poor communication between the operator and site personnel causing an incident to occur.

1.2 Lack of data on crane operators

When the new WorkSafeBC crane safety regulation came into effect on July 1, 2007, there was no data on how many crane operators were working in BC. WorkSafeBC estimated there were about 3,000 to 5,000 tower, boom and mobile cranes working in BC, with 250 tower cranes being used primarily in Greater Vancouver (WorkSafeBC, 2007).

When the dust had settled, more than 10,000 crane operators were identified and registered. When new operators coming into the system were taken into account, it was estimated that the actual number of crane operators needing to be certified was more in the range of 14,000.

The large number of estimated people requiring certification raised concerns the process would be delayed or postponed, before the first deadline extension on July 8, 2008. Given the overwhelming response to the program, the deadline for registering for certification was extended a second time to February 28, 2011. This deadline was met.

2.0 Development of the crane operator certification program for BC and the Yukon

2.1 BCACS completes pilot certification practical test

BCACS reached a significant milestone between May and July 2008, with the completion of the practical test pilot. It was conducted by a third party assessor, and supervised by BCACS. The third party assessor selected for this role was Fulford Harbour Group. The operator was required to demonstrate basic knowledge, skills and ability to safely operate the crane. The pilot used a small team of six assessors, who gradually ramped up the program.

The assessors went out to the work site as opposed to having people come to a central location to be tested. This approach relieved the operators of the stress of being tested on an unfamiliar crane. WorkSafeBC provided support to conduct the pilot and assess 100 operators from throughout the province on different cranes.

The practical test assessed crane operators against workplace competence standards developed by industry and registered as the official standards for crane operations by BCACS. The incumbent crane operators were assessed at the site of their choice on the crane of their choice. If the person being assessed was a mobile crane or boom truck operator, they had the option of driving their crane to a facility in the Lower Mainland.

The practical test allowed operators to demonstrate their control and knowledge of safe crane operation. It had five parts: hand signals, load chart and rigging, pre-operational inspection, crane setup and hazard assessment, and crane operation. The test took between 1.5 and 2 hours to complete and the results were mailed to the candidates within one week. If the operator was unsuccessful (not yet competent), they were given an opportunity to reassess within three months.

The Fulford Certification assessors were selected from experienced crane operators with years of experience operating and supervising crane operations. Some had previous teaching experience from the Operating Engineers Training Plans in BC and Ontario, Durham College in Whitby, Ontario, as well as the Northern Alberta Institute of Technology (NAIT) in Edmonton.

The practical test tested incumbent operators, who were people that registered with BCACS before July 1, 2007 or an operator coming from outside of BC after July 1, 2007, who held an acceptable certificate.

The findings of the pilot practical test were vetted through the BCACS industry consultation process, which included owners and operators of cranes. The pilot allowed the business model for the practical test to be established and proven. Once the industry was satisfied with the model, BCACS worked to put all the processes in place for the new crane operator certification scheme.

2.2 BCACS completes full pilot crane operator assessment and launches new safety certification scheme

BCACS completed the full theory and practical pilot crane operator assessment in December 2008, which marked the beginning of the new crane safety certification scheme for operators in British Columbia.

The Yukon Territory, through Yukon Workers' Compensation Board, participated in the process and adopted the same approach.

The BCACS assessment criteria made it necessary for all operators of boom, tower, and mobile cranes to pass a mandatory written and practical test. While the assessment system was being developed, operators needed only to register and agree to take the exams when and as they became available.

BCACS along with the third party contractor Fulford Certification began the process of contacting crane operators and setting up appointments for the practical assessment. Letters were sent out in groups of 2,500 according to when people had registered. There were two different groups of operators that needed to go through the practical

assessment process. The first group was made up of incumbent operators who were working in the industry. The second group was made up of new people coming into the industry.

BCACS had also developed the appropriate theory exams to evaluate the competence of trainees/apprentices learning on the job and in school. The certification assessment scheme was designed to put all operators through the same assessment process.

2.3 First group of BC crane operators become certified

BCACS reached an important milestone in April 2009, when the first group of crane operators were certified under the new system for crane operator assessment and certification in BC. The program certified 140 individuals, and an additional 400 individuals had been certified as part of the first intake made up of incumbent operators. This meant about 540 operators had gone through the new certification scheme.

The original letter was sent to a total of 1,250 people. The plan was to assess 300 crane operators a month and a total of 10,000 incumbent operators in a two-year period. The expected total of crane operators to go through the entire process by February of 2011 was 14,000.

2.4 The final push to meet the deadline

The final deadline set by BCACS for 10,000 registered crane operators in British Columbia to hold a valid certificate and legally operate a crane was February 28, 2011. By September 10, the deadline for crane operators to become certified and be in compliance with new safety regulations was fast approaching. The main message to crane operators was don't wait for the deadline.

The challenge was in estimating how many people still needed to go through the mandatory assessment process. BCACS found there was unexpected demand outside the Lower Mainland, which is where three quarters of the assessments were taking place. Fulford Harbour Group developed a plan to certify operators across BC, which included a schedule with dates and times that assessors were available in different geographic locations.

3.0 BCACS shifts to new business model post deadline

BCACS shifted from a high-volume to a normal-volume business model as the demand for certification eased. In the end, the total number of certified crane operators was pretty close to the original estimate of 10,000 crane operators. The assessment process moved to a focus on new crane operators entering into the market.

“Initially, our focus was on incumbent operators and in the next few months we will be operating at capacity,” said Cocks. “Existing crane operators were provided with a two-year phase-in period to become certified. We knew we would eventually have to shift gears to a lower volume business model, but this was happening sooner than expected (Gilbert, Richard, 2010b).”

There were 7,700 operators registered in the BCACS system and engaged in the new certification process. Out of these people, 4,400 had been assessed and received their credential. This means that there were about 2,300 that needed to be accounted for since the initial identification and registration began in 2007.

According to Cocks, there were several reasons for the slowing assessment numbers, including people who had retired, passed away or moved to other jurisdictions, as well as operators that were employed by mines, ports or railways in BC that are governed by regulators that have different jurisdictional authority. Therefore, they are not covered by WorkSafeBC and were exempt from the process. Another reason for the lower demand was the construction cycle in BC. The original estimate was developed during a construction boom with a high level of construction activity and employment. As the deadline for crane certification approached, the BC construction industry had slowed.

In addition, some construction firms registered all their employees with some of the operators as only occasional users. Once the system was understood, these employers reduced the number of registered operators to a select group.

In order to comply with the Agreement on Internal Trade, all out-of-province credentials were recognized and matched to the appropriate BC credential upon application. Assessment services continued, with the application process and the assessment fee of \$500 remaining the same until the deadline. The Level A practical assessment fee was increased to \$750, as assessment volumes declined and the incumbent operator phase came to a close.

As of Aug. 26 2012, more than 10,000 crane operators were certified and nearly 300 were in the assessment process.

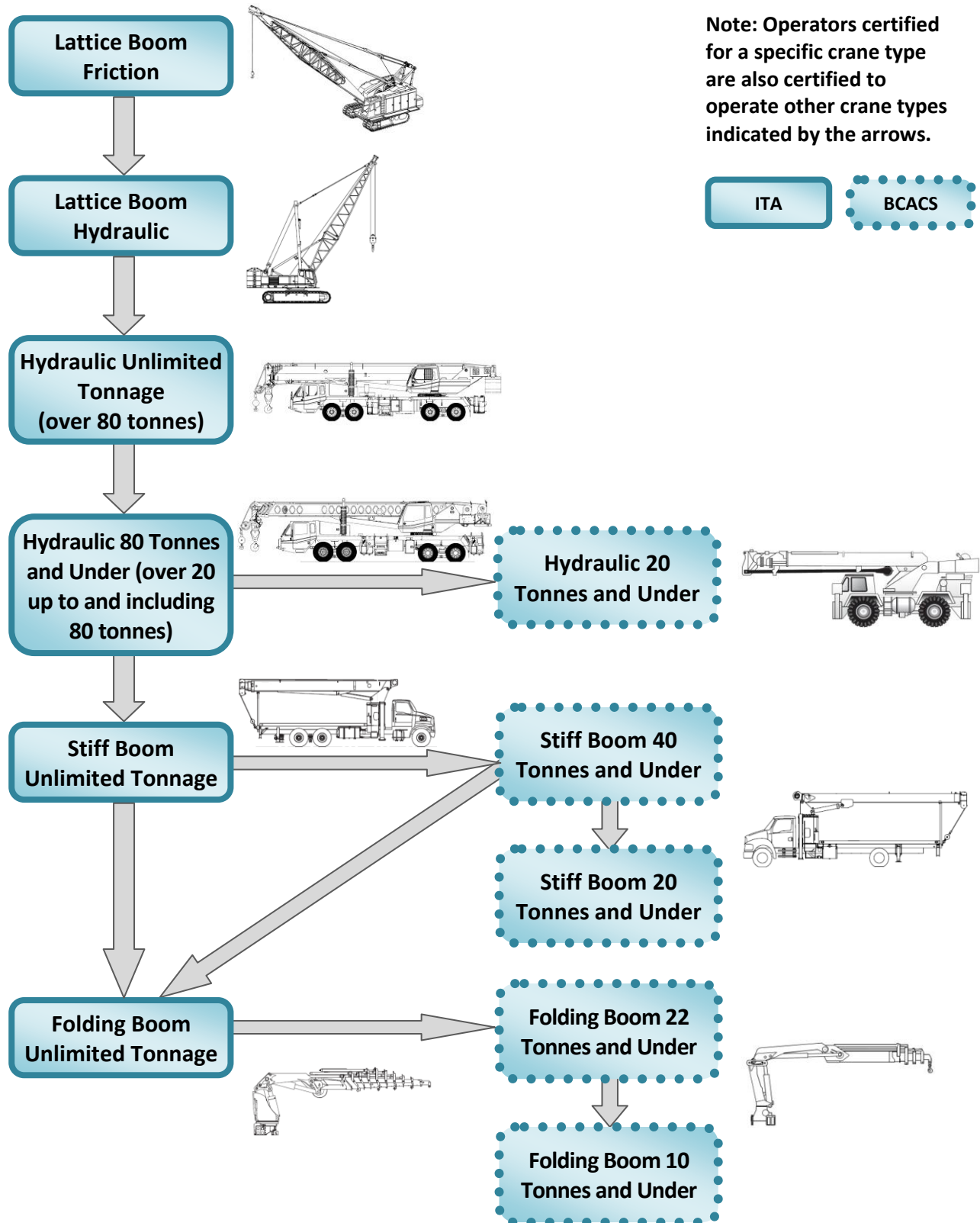
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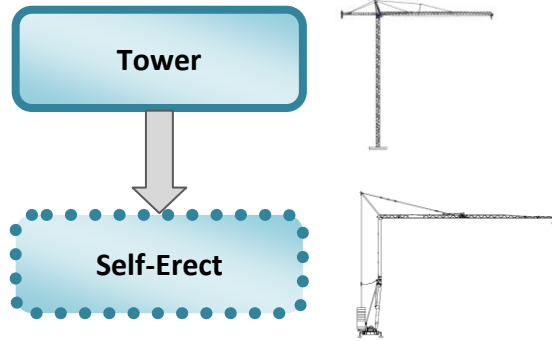
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**APPENDIX 1.0 Crane Classifications Requiring Crane Operator
Certification in BC 2007-2016**
(For current information, go to www.bcacs.ca)

CRANE CERTIFICATIONS AND THE TYPES OF CRANES THAT CAN BE OPERATED



CRANE CERTIFICATIONS AND THE TYPES OF CRANES THAT CAN BE OPERATED (CONT.)





BC Association for Crane Safety
595 Burrard St
PO Box 48883 Bentall
Vancouver, BC V7X 1A8
Tel: 604-336-4699
Fax: 604-336-4510
Web: www.bcacs.ca
Email: info@bcacs.ca