

# CRANE OPERATOR COMPETENCIES

## Stiff Boom Truck Crane - Unlimited Tonnage

K: Indicates that it is a theory competency (knowledge of the crane operator)

W: Indicates that it is a workplace competency (an activity an operator performs)

### 1. Safety (CS)

- |     |   |                          |
|-----|---|--------------------------|
| 1.1 | Demonstrate knowledge of safe working practices for crane operators (K)               | <input type="checkbox"/> |
| 1.2 | Demonstrate knowledge of Workplace Hazardous Materials Information System (WHMIS) (K) | <input type="checkbox"/> |
| 1.3 | Manage first aid in emergency situations (K)  | <input type="checkbox"/> |
| 1.4 | Demonstrate knowledge of power line hazards and high voltage equipment (K)            | <input type="checkbox"/> |
| 1.5 | Comply with WorkSafe BC and OH&S regulations (W)                                      | <input type="checkbox"/> |
| 1.6 | Respond to fire emergencies (W)   | <input type="checkbox"/> |

### 2. Communications (CCOM)

- |     |  |                          |
|-----|--|--------------------------|
| 2.1 | Demonstrate knowledge of personnel involved in crane operations (K)              | <input type="checkbox"/> |
| 2.2 | Demonstrate knowledge of hand signals (K)  | <input type="checkbox"/> |
| 2.3 | Demonstrate knowledge of radio communications (K)                                | <input type="checkbox"/> |
| 2.4 | Demonstrate knowledge of workplace communications (K)                            | <input type="checkbox"/> |
| 2.5 | Use hand signals in the workplace (W)  | <input type="checkbox"/> |
| 2.6 | Use radio communications in the workplace (W)                                    | <input type="checkbox"/> |
| 2.7 | Communicate information clearly and check for understanding in the workplace (W) | <input type="checkbox"/> |

### 3. Cranes (CC)

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|------|--|--------------------------|
| 3.1  | Demonstrate knowledge of types of cranes and classifications (K)   | <input type="checkbox"/> |
| 3.3  | Demonstrate knowledge of terminology related to craning and craning concepts (K)                             | <input type="checkbox"/> |
| 3.5  | Demonstrate knowledge of power transfer for boom trucks with stiff booms unlimited tonnage (K)               | <input type="checkbox"/> |
| 3.6  | Demonstrate knowledge of hoisting terminology, functions and systems (K)                                     | <input type="checkbox"/> |
| 3.7  | Demonstrate knowledge of regulatory requirements pertaining to cranes (K)                                    | <input type="checkbox"/> |
| 3.14 | Demonstrate knowledge of components and attachments for boom trucks with stiff booms unlimited tonnage (K)   | <input type="checkbox"/> |
| 3.15 | Demonstrate knowledge of engines and ancillary systems on boom trucks with stiff booms unlimited tonnage (K) | <input type="checkbox"/> |

**4. Rigging (CR)**

- 4.1 Demonstrate knowledge of lifting theory and forces (K)
- 4.2 Demonstrate knowledge of rigging hardware, materials, tools and manuals (K)
- 4.3 Demonstrate knowledge of types and function of wire rope and chains (K)
- 4.4 Demonstrate knowledge of installation, inspection and storage of wire rope (K)
- 4.5 Demonstrate knowledge of rigging techniques (K)
- 4.6 Use rigging hardware and tools in the workplace (W)

**5. Load Charts (CLC)**

- 5.1 Demonstrate knowledge of determining weight loads using fundamental math functions and calculations (K)
- 5.2 Demonstrate knowledge of loading and lifting (K)
- 5.3 Interpret load charts and load study drawings to configure crane for workplace operation (W)

**6. Transportation & Delivery (ATD)**

- 6.1 Demonstrate knowledge of BC Ministry of Transportation - Commercial Transport rules and regulations as they pertain to transportation of cranes (K)
- 6.2 Demonstrate knowledge to prepare and to transport a mobile crane (K)
- 6.3 Demonstrate knowledge of to assemble and disassemble a crane at a worksite (K)
- 6.4 Prepare and transport a mobile crane to a worksite following all highway and traffic rules and regulations (W)
- 6.5 Assemble and disassemble a crane at a worksite (W)
- 6.11 Demonstrate knowledge to prepare a boom truck with stiff boom unlimited tonnage for highway / road travel

**7. Site Planning & Crane Positioning (ASPCP)**

- 7.1 Demonstrate knowledge of accurate site assessment tools (K)
- 7.2 Demonstrate knowledge to locate and safely position crane (K)
- 7.3 Conduct an accurate site assessment and safely position a crane in the workplace (W)
- 7.8 Demonstrate knowledge to locate and safely position a boom truck with stiff boom unlimited tonnage using site assessment tools (K)
- 7.9 Conduct an accurate site assessment and safely position a boom truck with stiff boom unlimited tonnage in the workplace (W)

**8. Crane Operations (CO)**

- |      |  |                          |
|------|--|--------------------------|
| 8.1  | Demonstrate knowledge of pre-operational requirements in crane operations (K)                            | <input type="checkbox"/> |
| 8.4  | Demonstrate crane set-up per manufacturer's instructions (except Task 4 in Mobile) (W)                   | <input type="checkbox"/> |
| 8.11 | Demonstrate knowledge of operating a boom truck with stiff boom unlimited tonnage (K)                    | <input type="checkbox"/> |
| 8.12 | Operate a boom truck with stiff boom unlimited tonnage to safely lift and place loads in a workplace (W) | <input type="checkbox"/> |

**9. Maintenance & Service (CMS)**

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|------|--|--------------------------|
| 9.7  | Maintain an equipment logbook to retain a permanent written record of maintenance and repairs (W)  | <input type="checkbox"/> |
| 9.18 | Demonstrate knowledge of inspecting engines, monitoring devices and hydraulic systems on boom trucks with stiff booms unlimited tonnage (K)                          | <input type="checkbox"/> |
| 9.19 | Demonstrate knowledge of servicing and maintenance procedures on boom truck with stiff booms unlimited tonnage (K)   | <input type="checkbox"/> |
| 9.20 | Complete maintenance checklists (engine on / engine off) and maintain engines on a boom truck with stiff boom unlimited tonnage to manufacturer's specifications (W) | <input type="checkbox"/> |
| 9.21 | Perform routine inspections and maintenance of hydraulic systems on a boom truck with stiff boom unlimited tonnage (W)   | <input type="checkbox"/> |
| 9.22 | Inspect monitoring devices and control mechanisms on a boom truck with stiff boom unlimited tonnage (W)  | <input type="checkbox"/> |