

# Mobile Crane Operator

## NOA Structure 2013

### BLOCK A COMMON OCCUPATIONAL SKILLS

#### Task 1 Performs safety related functions

- 1.01 Maintains a safe work environment.  
Uses personal protective equipment (PPE) and safety
- 1.02 equipment.

#### Task 2 Organizes work.

- 2.01 Communicates with others.
- 2.02 Uses documentation.

### BLOCK B HOISTING CALCULATIONS

#### Task 3 Determines load weights.

- 3.01 Identifies the weight.
- 3.02 Calculates weight.

#### Task 4 Calculates crane capacity.

- 4.01 Determines radius and crane configuration.
- 4.02 Interprets load charts.

#### Task 5 Performs rigging calculations.

- 5.01 Performs sling angle calculations
- 5.02 Performs working load limit (WLL) calculations.

### BLOCK C CRANE INSPECTION AND MAINTENANCE

#### Task 6 Performs pre-operational checks and regular inspections.

- 6.01 Inspects engine systems.
- 6.02 Inspects air systems.
- 6.03 Inspects electrical systems.
- 6.04 Inspects hydraulic systems.
- 6.05 Inspects chassis/car body and running gear components.
- 6.06 Inspects outriggers and counterweights.
- 6.07 Inspects boom components and attachments.
- 6.08 Inspects hoisting systems.

Moved to:

## NEW RSOS Structure 2021

### MWA A PERFORMS COMMON OCCUPATIONAL SKILLS

#### Task 1 Performs safety related functions

- 1.01 Maintains safe work environment  
Uses personal protective equipment (PPE) and safety
- 1.02 equipment
- 1.03 Uses documentation

#### 2.01 Task 2 Uses communication and mentoring techniques

- 1.03 2.01 Uses communication techniques
- 2.02 Uses mentoring techniques

### MWA B PERFORMS HOISTING CALCULATIONS

#### Task 3 Determines load weights

- 3.01 Identifies weight
- 3.02 Calculates weight

#### Task 4 Calculates crane capacity

- 4.01 Determines radius and crane configuration
- 4.02 Interprets load charts

#### Task 5 Performs rigging calculations

- 5.01 Performs sling angle calculations
- 5.02 Performs working load limit (WLL) calculations

### MWA C INSPECTS AND MAINTAINS CRANE

#### Task 6 Performs pre-operational checks and regular inspections

- 6.01 Inspects engine systems
- 6.02 Inspects air systems
- 6.03 Inspects electrical systems
- 6.04 Inspects hydraulic systems
- 6.05 Inspects chassis/car body and running gear components
- 6.06 Inspects outriggers and counterweights
- 6.07 Inspects boom components and attachments
- 6.08 Inspects hoisting systems

Moved from:

2.02

NEW

2.01

**Task 7 Performs operational and continual checks.**

- 7.01 Checks operating controls.
- 7.02 Inspects monitoring and warning systems.
- 7.03 Monitors running lines, hoist lines and standing ropes.
- 7.04 Monitors gauges and warning systems.

**Task 8 Performs minor crane maintenance.**

- 8.01 Changes oil and filter.
- 8.02 Greases crane
- 8.03 Lubricates wire ropes.
- 8.04 Makes minor adjustments and replacements.

**BLOCK D RIGGING**

**Task 9 Inspects, maintains and stores slings and hardware.**

- 9.01 Lubricates slings and hardware.
- 9.02 Identifies deficiencies in slings and hardware.
- 9.03 Disposes of damaged slings and hardware.
- 9.04 Stores slings and hardware.

**Task 10 Follows rigging procedures.**

- 10.01 Selects required rigging.
- 10.02 Rigs loads.
- 10.03 Monitors rigging.

**BLOCK E LIFT PLANNING, SITE PREPARATION AND CRANE SETUP**

**Task 11 Performs pre-lift planning.**

- 11.01 Participates in routine, engineered and specialty lift planning.
- 11.02 Evaluates risks and hazards.

**Task 12 Sets up crane.**

- 12.01 Performs final site inspection.
- 12.02 Positions crane.
- 12.03 Completes setup.

**Task 7 Performs operational and continual checks**

- 7.01 Checks operating controls
- 7.02 Inspects monitoring and warning systems
- 7.03 Monitors running lines, hoist ropes and standing ropes
- 7.04 Monitors gauges and warning systems
- 7.05 Monitors support base

NEW

**Task 8 Performs crane maintenance**

- 8.01 Changes oil and filter
- 8.02 Greases crane
- 8.03 Lubricates wire ropes
- 8.04 Makes adjustments and replacements

**MWA D PERFORMS RIGGING**

**Task 9 Inspects, maintains and stores slings and hardware**

- 9.01 Lubricates slings and hardware
- 9.02 Identifies deficiencies in slings and hardware
- 9.03 Disposes of damaged slings and hardware
- 9.04 Stores slings and hardware

**Task 10 Follows rigging procedures**

- 10.01 Selects required rigging
- 10.02 Rigs loads
- 10.03 Monitors rigging

**MWA E PLANS LIFT, PREPARES SITE AND SETS UP CRANE**

**Task 11 Performs pre-lift planning**

- 11.01 Participates in routine, engineered and specialty lift planning
- 11.02 Evaluates risks and hazards

**Task 12 Sets up crane**

- 12.01 Performs final site inspection
- 12.02 Positions crane
- 12.03 Completes setup

**BLOCK F CRANE ASSEMBLY, DISASSEMBLY AND TRANSPORT****Task 13 Loads and unloads components for transport.**

- 13.01 Loads crane and components.
- 13.02 Unloads crane and components.

**Task 14 Drives cranes on public roadways.**

- 14.01 Performs pre-trip planning.
- 14.02 Prepares crane for transport.
- 14.03 Drives cranes.

**Task 15 Assembles and disassembles lattice boom cranes.**

- 15.01 Installs tracks on car body (lattice boom).
- 15.02 Installs house (lattice boom).
- 15.03 Installs outrigger boxes (lattice boom).
- 15.04 Installs boom base (lattice boom).
- 15.05 Assembles boom and jib (lattice boom).
  
- 15.06 Installs counterweights (lattice boom).
- 15.07 Installs hoist lines, hook blocks and overhaul ball (lattice boom).  
Removes hoist lines, hook blocks and overhaul ball (lattice boom).
- 15.08 boom).
  
- 15.09 Disassembles boom and jib (lattice boom).
- 15.10 Removes counterweights (lattice boom).
- 15.11 Removes boom base (lattice boom).
- 15.12 Removes house (lattice boom).
- 15.13 Removes tracks from car body (lattice boom).
- 15.14 Removes outrigger boxes (lattice boom).

**Task 16 Assembles and disassembles telescopic boom cranes.**

- 16.01 Installs outrigger boxes (telescopic boom).
- 16.02 Installs main boom (telescopic boom).  
Installs hoist lines, hook blocks and overhaul ball (telescopic boom).
- 16.03 boom).
- 16.04 Installs counterweights (telescopic boom).
- 16.05 Installs swing-away jibs and inserts (telescopic boom).
- 16.06 Removes swing-away jibs and inserts (telescopic boom).
- 16.07 Removes counterweights (telescopic boom).  
Removes hoist lines, hook blocks and overhaul ball (telescopic boom).
- 16.08 boom).

**MWA F ASSEMBLES, DISASSEMBLES AND TRANSPORTS CRANE****Task 13 Loads and unloads components for transport**

- 13.01 Loads crane and components
- 13.02 Unloads crane and components

**Task 14 Drives cranes on public roadways**

- 14.01 Performs pre-trip planning
- 14.02 Prepares crane for transport
- 14.03 Drives cranes

**Task 15 Assembles and disassembles lattice boom cranes**

- 15.01 Installs tracks on car body (lattice boom)
- 15.02 Installs **superstructure/upperworks** (lattice boom)
- 15.03 Installs outrigger boxes (lattice boom)
- 15.04 Installs boom base (lattice boom)
- 15.05 Installs counterweights (lattice boom) 15.05
- 15.06  
Assembles **main boom, tip and boom attachments** (lattice boom)
- 15.07 Installs hook blocks and overhaul ball (lattice boom) 15.07
  
- 15.08 Removes hook blocks and overhaul ball (lattice boom)
- 15.09 Disassembles **main boom, tip and boom attachments** (lattice boom) 15.09
- 15.10 Removes counterweights (lattice boom)
- 15.11 Removes boom base (lattice boom)
- 15.12 Removes **superstructure/upperworks** (lattice boom) 15.12
- 15.13 Removes tracks from car body (lattice boom)
- 15.14 Removes outrigger boxes (lattice boom)

**Task 16 Assembles and disassembles telescopic boom cranes**

- 16.01 **Installs tracks on car body (telescopic boom)** NEW
- 16.02 Installs outrigger boxes (telescopic boom)
  
- 16.03 **Installs superstructure/upperworks (telescopic boom)** NEW
- 16.04 Installs main boom (telescopic boom)
- 16.05 Installs hook blocks and overhaul ball (telescopic boom)
- 16.06 Installs counterweights (telescopic boom)
- 16.07 Installs jibs and inserts (telescopic boom)
- 16.08 Removes jibs and inserts (telescopic boom)

- 16.09 Removes main boom (telescopic boom).
- 16.10 Removes outrigger boxes (telescopic boom).

- 16.11 16.09 Removes counterweights (telescopic boom)
- 16.12 16.10 Removes hook blocks and overhaul ball (telescopic boom)
- 16.11 Removes main boom (telescopic boom)
- 16.12 Removes outrigger boxes (telescopic boom)
- 16.13 Removes tracks from car body (telescopic boom)
- 16.14 Removes superstructure/upperworks (telescopic boom)

NEW  
NEW

**Assembles and disassembles specialty equipment and**

**Task 17 attachments.**

- 17.01 Assembles specialty equipment and attachments.
- 17.02 Disassembles specialty equipment and attachments.

**Assembles and disassembles specialty equipment and**

**Task 17 attachments**

- 17.01 Assembles specialty equipment and attachments
- 17.02 Disassembles specialty equipment and attachments

**BLOCK G CRANE OPERATIONS**

**Task 18 Performs common craning operations.**

- 18.01 Configures load moment indicator (LMI).
- 18.02 Mobilizes crane on jobsite.

**MWA G OPERATES CRANE**

**Task 18 Performs common craning operations**

- 18.01 Configures load moment indicator (LMI)
- 18.02 Mobilizes crane on jobsite

**Task 19 Operates friction drive lattice boom cranes.**

- 19.01 Operates friction drive crawler-mounted lattice boom cranes
- 19.02 Operates friction drive truck-mounted lattice boom cranes

**Task 19 Operates friction drive lattice boom cranes**

- 19.01 Operates friction drive crawler-mounted lattice boom cranes
- 19.02 Operates friction drive truck-mounted lattice boom cranes

**Task 20 Operates hydraulic drive lattice boom cranes**

- 20.01 Operates hydraulic drive crawler-mounted lattice boom cranes.
- 20.02 Operates hydraulic drive truck-mounted lattice boom cranes.

**Task 20 Operates hydraulic drive lattice boom cranes**

- 20.01 Operates hydraulic drive crawler-mounted lattice boom cranes
- 20.02 Operates hydraulic drive truck-mounted lattice boom cranes

**Task 21 Operates telescopic boom cranes.**

- 21.01 Operates crawler-mounted telescopic cranes.
- 21.02 Operates rubber-mounted telescopic cranes.

**Task 21 Operates telescopic boom cranes**

- 21.01 Operates crawler-mounted telescopic cranes
- 21.02 Operates rubber ~~tire~~-mounted telescopic cranes

**Task 22 Performs specialty craning operations.**

- 22.01 Operates piledriver.
- 22.02 Performs duty cycle operations.
- 22.03 Operates cranes on barges.
- 22.04 Performs multi-crane lifts.
- 22.05 Uses personnel hoisting equipment.

**Task 22 Performs specialty craning operations**

- 22.01 Operates ~~crane with~~ piledriving equipment
- 22.02 Performs duty cycle operations
- 22.03 Operates cranes on ~~floating~~ platforms
- 22.04 Performs multi-crane lifts
- 22.05 Uses personnel hoisting equipment

**Task 23 Secures crane.**

- 23.01 Secures crane for short term.

**Task 23 Secures crane**

- 23.01 Secures crane for short term

23.02 Secures crane for long term.

23.02 Secures crane for long term