

Tower Crane Operator On-the-Job Checklist



	Level 1	Page 1/3
Red Seal Tasks	On-The-Job Duties	Completed
Performs safety-related functions	Clean windows & remove clutter from operator's cabin	☐
	Identify, select & inspect PPE equipment such as fall protection	☐
	Participate in completion of the task hazard analysis	☐
Uses communication & mentoring techniques	Communicate with rigging leader & signal person using a radio or hand signals	☐
Performs pre-operational checks & regular inspections	Inspect & verify crane base & condition	☐
	Check crane's engine oil levels & top up as required	☐
	Inspect wire rope including the hook & block	☐
	Inspect hydraulic hoses & fittings for leaks or cracks	☐
	Verify condition & protection of the base electrical connections	☐
	Inspect structure for signs of metal fatigue	☐
	Verify the smooth operation of the travel components	☐
	Verify that all controls are functioning & damage free	☐
	Inspect the operator's seat & safety harness condition & attachment	☐
	Document inspection findings in the crane log & report deficiencies to the supervisor	☐
Performs continual checks	Monitor weather forecast to anticipate changing conditions	☐
	Identify changes to the work site that may affect operation	☐
	Verify warning systems & automatic cutouts operate	☐
	Monitor equipment operation for abnormal sound	☐
	Monitor base & ground conditions during operation	☐
Maintains mechanical components	Lubricate moving parts	☐
	Apply grease to wire rope & sheeves to prevent corrosion	☐

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Tower Crane Operator

On-the-Job Checklist



	Level 1	Page 2/3
Red Seal Tasks	On-The-Job Duties	Completed
Participates in tower crane assembly, disassembly & transportation	Assist the journeyperson in securing the base of the crane	☐
	Assist the journeyperson with the removal of the crane hook/ball	☐
	Assist the journeyperson in readying a self-erecting tower crane for transport	☐
	Assist the journeyperson in securing the crane to the structure according to engineered specifications	☐
Participates in tower crane climbing & reconfigurations	Assist the journeyperson with the insertion of new mast sections at the base of the crane	☐
	Assist the journeyperson with the use of hydraulic jacks to insert a new mast section	☐
	Assist the journeyperson with the addition of counterweights to an existing tower crane	☐
Plans lifts	Identifies the weight of an object by referring to shipping or manufacturer information	☐
	Identify the correct load chart for the lift & components used	☐
	Determine the order in which to unload a shipment based upon order of use	☐
	Participate in a pre-lift planning meeting to identify lift responsibility & role	☐
Inspects, maintains & stores rigging equipment	Remove rigging with expired inspection dates from service	☐
	Inspect & lubricate wire rope slings prior to storing	☐
	Organize & store rigging to prevent damage	☐
Follows rigging procedures	Identify the rigging required for a basic shaped load	☐
	Rig a load accounting for variables such as sling angles & load dimensions	☐
	Guide a load into position using a tagline	☐
Performs pre-lift (warm-up) activities	Verify & document the function of cutouts, alarms & wind sensors	☐
	Verify the crane's load capacity & that movement stays within designated boundaries	☐
Shuts down & secures tower cranes	Lock down crane when unattended to prevent unauthorized access or operation	☐
	Set jib to weathervane when leaving for the weekend	☐

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	Level 1	Page 3/3
Red Seal Tasks	On-The-Job Duties	Completed
Operates tower cranes	Travel a load from the crane base out to the boom end	☐
	Lower an object into a lifting well using a spotter	☐
	Rotate crane with a load on the hook	☐
	Verify rigging configuration & center of gravity by completing a test lift	☐
	Understand the limitations of a travelling tower crane	☐
	Hoist a load up while rotating away	☐
Performs specialty tower crane operations	Identify the requirements & limitations for personnel hoisting	☐

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	Level 2	Page 1/3
Red Seal Tasks	On-The-Job Duties	Completed
Performs safety-related functions	Show another worker how to complete an unfamiliar task	☐
Performs pre-operational checks & regular inspections	Inspect structure for fatigue, loose fasteners & damage	☐
	Inspect engine belts & pulley condition	☐
	Inspect the wire rope for signs of bird caging or metal fatigue	☐
	Inspect hydraulic filter to verify hydraulic fluid flows freely	☐
	Inspect cab electrical connections for loose or damaged cables	☐
	Inspect the crane's attachment to the structure for any indications of fatigue or tearing	☐
	Inspect the condition of the sensors & limit switches, & documenting signs of damage	☐
	Verify the operation of the cranes safety systems including LMI & anemometer readings	☐
	Verify the operator detection switch shuts down the crane	☐
	Verify the last service date is within manufacturer & regulatory requirements	☐
Performs continual checks	Set up automated alerts for changes in weather conditions	☐
	Communicate with other cranes & heavy equipment in the work area	☐
	Visually monitor the lines using the camera system during operation	☐
	Track component health & performance using real-time condition monitoring	☐
	Continuously monitor the tower crane's mast, jib, & support structure using integrated sensors & real-time data analytics	☐
Performs minor crane maintenance	Inspect mechanical components for signs of wear	☐
	Monitor the automated lubrication system levels	☐
Participates in tower crane climbing & reconfigurations	Monitor base alignment, secure new sections & maintain structure stability throughout assembly	☐
	Disconnect & remove the climbing unit	☐
	Adjust or replace components such as the jib, counterweights, or mast sections	☐

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	Level 2	Page 2/3
Red Seal Tasks	On-The-Job Duties	Completed
Participates in tower crane assembly, disassembly & transportation	Coordinate the assembly of the tower crane based upon the sequence of assembly	☐
	Coordinate the disassembly of the tower crane based upon the sequence of assembly	☐
	Transport a self-erecting tower crane to the jobsite using public roadways	☐
	Disassemble a self-erecting tower crane	☐
Plans lifts	Calculate the weight of complex shaped load	☐
	Identify the load chart to be used with optional components	☐
	Establish a lifting schedule based upon site requirements	☐
	Conduct a site survey to identify potential factors that could impact the lift	☐
Inspects, maintains & stores rigging equipment	Remove a kinked or damaged steel sling from service	☐
	Disassemble & lubricate a spreader bar then reassemble	☐
	Perform a post-use inspection of slings & hardware prior to storage	☐
Follows rigging procedures	Calculate the rigging required for a complex shaped load	☐
	Use rigging to stabilize a load with an offset center of gravity	☐
	Lift load off the ground to test the rigging configuration	☐
Operates tower cranes	Trolley in & out to position loads at various distances along the jib	☐
	Adjust jib angle to position loads at varying heights & distances	☐
	Rotate the crane's superstructure to position loads horizontally	☐
	Coordinate a blind lift involving multiple spotters	☐
	Maintain communication with spotters during crane travel operations	☐
	Boom up & down while traveling the crane to reposition loads	☐

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	Level 2	Page 3/3
Red Seal Tasks	On-The-Job Duties	Completed
Performs pre-lift (warm-up) activities	Test the hoisting, slewing, & trolley mechanisms under various load conditions	☐
	Adjust LMI to account for the components used during a lift	☐
Performs specialty tower crane operations	Plan a multi-crane lift	☐
	Follow site-specific protocols for coordination of lifts	☐
Shuts down & secures tower cranes	Verify all controls are in a neutral position & activate the necessary locks	☐
	Disengage all operational controls & lock the crane's superstructure	☐

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Information Regarding the Checklist

Saskatchewan Apprenticeship and Trade Certification Commission's (SATCCs) On-The-Job Checklist provides a complete list of trade-specific Red Seal tasks for apprentices to complete under the supervision of a journeyman. This work should be completed prior to attending the technical training level under which the duties are listed (e.g. Level 1 completed prior to attending Level 1 technical training).

Completing this checklist will ensure that apprentices are exposed to the full scope of a particular Red Seal trade throughout their apprenticeship program. It will also help prepare apprentices for each level of technical training by performing work on-the-job relating specifically to topics covered later on. The trade-specific tasks listed have been reviewed by certified journeymen in Saskatchewan for their accuracy and have been set to an appropriate skill level.

An apprentice spends approximately 85% of their apprenticeship term training on-the-job. It is the both the apprentice and the employer's or journeyman's responsibility to supervise an apprentice's practical skills development during their program.

To promote transparency and consistency, this document aligns with the 2024 Tower Crane Operator Red Seal Occupational Standard (Employment and Social Development Canada).

A complete version of the Occupational Standard can be found at www.red-seal.ca

Saskatchewan Apprenticeship & Trade Certification Commission (Regina)

2140 Hamilton St Regina SK, S4P 2E3

Tel: (306) 787-2444

Toll Free: 1-877-363-0536

Website: www.saskapprenticeship.ca

Saskatchewan Apprenticeship & Trade Certification Commission (Saskatoon)

603 45th Street West Saskatoon, SK S7L 5W5

Tel: (306) 933-8476

Toll Free: 1-877-363-0536

Website: www.saskapprenticeship.ca

District Offices

Estevan (306) 637-4930

La Ronge (306) 425-4385

Moose Jaw (306) 694-3735

North Battleford (306) 446-7409

Prince Albert (306) 953-2632

Swift Current (306) 778-8945

Yorkton (306) 786-1394

All work performed in this checklist is to be done under the supervision and guidance of a certified journeyman

1-877-363-0536
apprenticeship@gov.sk.ca
saskapprenticeship.ca

