

SAFETY PROGRAM

CONSTRUCTION SITE





TITLE

SAFETY PROGRAM – CONSTRUCTION SITE

IDENTIFIER

VPO-SSEQ-PROG-1-E-V3

In this program, Guay and Machineries Provinciales inc. will hereby be referred to as “GUAY”.

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DEPARTMENT SSEQ	DOCUMENT OWNER LUCÉ DUGUAY	APPROVED BY J.-F. Houde, V.- P. Operations	CREATED 2022-06-06	REVISION 2024-02-29	REV. V3	PAGE Page 2 sur 72
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TRACK OF CHANGES		
Date	Section	Modifications made
2024-02-29	2. Responsibilities of Any Worker Present on a Construction Site	<ul style="list-style-type: none"> Precision in the section “Hazard Prevention and Control”, this phrase was added: “Before the first lift of the work shift, carry out the daily inspection and document it.”
2024-02-29	4.4.3 Work in Proximity of Electrical Lines	Addition of section “Power line of 250 000V.”
2024-02-29	4.5 Crane Driving/Operating (GUAY Supplementary Guidelines)	Clarifications made to section “Translational motion or displacement of a crane on a private road”.
2024-02-29		Addition of section “Unattended”.
2024-02-29		Addition of section “Position of the operator”.
2024-02-29		Addition of section “Uneven outriggers”.
2024-02-29		Addition of section “Range limiting device”.
2024-02-29		Addition of section “Tandem with a third party’s equipment”.
2024-02-29		Addition of section “Multiple Lift Rigging”.
2024-02-29		Addition of section “Lifting cages”.
2024-02-29		Enhancement of section “Quay, pier, bridge, viaduct, dam, slab, multi-storey parking”
2024-02-29		Addition of section “Crane grounding”.
2024-02-29		Enhancement of section “Anemometer”.
2024-02-29		Enhancement of section “Lightning”.
2024-02-29		4.6 General Safety Rules
2024-02-29	4.6 General Safety Rules	Addition of section “Emergency equipment – vehicles”.
2024-02-29	4.6.1 Work in a confined space	Rewrite of the section.
2024-02-29	6.4. Right of Refusal	Rewrite of the section.

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Preface

This safety program aims to eliminate at the source all hazards to the health, safety, and physical well-being of our workers.

We work together to maintain a professional service for our clients where, for each lift, the hazards are identified and assessed, and control measures are appropriately selected and implemented to ensure an acceptable level of risk for all parties. Our prevention management system structure is comprised of 7 sections:

1. Governance;
2. Worker Participation;
3. Hazard Identification and Risk Assessment;
4. Hazard Prevention and Control;
5. Education and Training;
6. Program Evaluation and Improvement;
7. Coordination and Communication on a Multi-Employer Construction Site.

This document must serve as a guide only; it does not replace the laws, regulations, and standards that govern our fields of activity, such as:

- Occupational Health and Safety Act (The French abbreviation is used in this program: LSST & RSST);
- Safety Code for the Construction Industry (The French abbreviation is used in this program: CSTC);
- Canadian Standard Association, Safety Code for Mobile Cranes (CSA Z150 : 20);
- Canadian Standard Association, Safety Code for Tower Cranes (CSA Z-248 : 14).



Claude Chartrand

Director — Health, Safety, Environment and Quality

1. Governance

1.1 Strategic Plan 2022-2024

Our strategic plan goes beyond simply planning our activities. It allows us to examine our internal and external contexts, to make projections for the future, and to determine the strategies that will enable us to achieve our mission and vision. It is the starting point of the results-based management cycle. All our efforts will be aimed toward accomplishing this.

OUR VALUES	OUR MISSION			
	BUILDING THE FUTURE, ONE LIFT AT A TIME			
PASSION	OUR VISION			
	To perfect the art of safe, personalized, and ingenious lifting with the aid of our qualified team and our state-of-the-art equipment. We have the ambition to elevate all projects, at all times, everywhere in Quebec.			
AMBITION	OUR FIELDS			
RESPECT	Accentuate our OHS culture by increasing our presence on construction sites and in our facilities in order to make our colleagues more aware of the risks surrounding their work.	Develop the employee-experience by deploying out Talent, Culture and Communication (TCC) department within the company to better support our colleagues.	Consolidate our business relations by getting closer to our clients in order to preserve our bond of trust and transparency.	Ensure the quality of our fleet by improving our preventive maintenance in order to reduce unplanned work stoppages.
COLLABORATION	Improve client service by optimizing our business processes in order to reduce errors in planning, work execution and invoicing.	Pursue our digital transformation by digitizing the process of managing time cards and service contracts in order to make this key business process as efficient as possible.	Mobilize our sales force around common objectives by harmonizing our sales practices at the provincial level in order to offer the highest level of service to our clients.	Develop a culture of innovation by constantly challenging our ways of doing things in order to optimize our business processes and our organizational structure.
INTEGRITY				

1.2 Health, Safety, Environment and Quality Policy

Management is firmly committed to:

Health & Safety

1. Prevent any undesirable event;
2. Provide a safe workplace and safe equipment;
3. Establish and maintain professional work methods and practices;
4. Provide targeted training that brings added value;
5. Consult and receive suggestions from workers about dangerous situations;
6. Develop individual responsibility in regards to safety;
7. Constantly improve and evaluate management practices.

Environment

1. Comply with all environmental regulations that apply to our activities;
2. Implement practices to minimize the risk of oil spills and their consequences;
3. Ensure that any discharge into the environment is handled in accordance with the regulations in effect;
4. Monitor and reduce energy consumption;
5. Train managers and workers efficiently.

Quality

1. Adapt to the expectations and standards of our clients;
2. Provide services that meet their requirements;
3. Encourage a quality service based on the pride of our workers in their know-how and their commitment to working professionally.



Jean-Marc Baronet
President and Chief Executive Officer



Guillaume Gagnon
Executive Vice-President

1.3 Our Golden Safety Rules

Subject	Golden Safety Rule	Section	Regulation
Machine/equipment security	Bypassing a security system is prohibited.	4.4	CSTC 2.20.13. RSST 189.1.
Power lines	Respect the power line approach limits, Program the range limiting device when required.	4.2.4.9 4.3 Annexe 9	CSTC 5.2.1. RSST 331.
Capacity	Respect the load capacity of the equipment.	4.2.4.1	CSTC 2.15.3. RSST 245
Fall protection	Use fall protection systems.	4.4	CSTC 2.9.1. 2. RSST 33.1
Procedures	Comply with the procedures provided in the manufacturer's manuals.	4.2.4	CSTC 3.10.1.g)
Excavation	Stay a minimum of 3 meters away from any excavation.	4.4	CSTC 3.15.3.5.b)
Signal person	Have a signal person present during reverse maneuvers.	4.4	CSTC 2.8.5. RSST 284.
Reporting	Report any incident, near miss, or spill.	4.4	CSTC 2.4.2.a)

1.4 Essential Elements of Management of the Safety Program

Governance	<ul style="list-style-type: none"> Senior management demonstrates a commitment to continually improve prevention, communicates this commitment to workers, and establishes expectations and responsibilities; Managers, at all levels, make HSEQ a core organizational value, communicate the HSEQ objectives, provide adequate support and resources to support this program, and lead by example.
Worker Participation	<ul style="list-style-type: none"> Workers and their representatives are involved in all aspects of the program — including the setting of objectives, identification of hazards, investigating incidents and progress monitoring; All workers, including subcontractors, understand the role and responsibilities assigned to them by this program and what they must do to carry them out effectively; Workers are encouraged and have ways to communicate with managers, openly and without fear of reprisal, in order to report any problems or concerns with regards to prevention; Any obstacle to workers' participation in this programme is dealt with.

Hazard Identification and Risk Assessment	<ul style="list-style-type: none"> Procedures are put in place to continually identify the dangers inherent to the work and assess the risks; The initial assessment of existing hazards and the control measures put in place is followed by a periodic observation/reassessment to identify new hazards.
Hazard Prevention and Control	<ul style="list-style-type: none"> Managers and workers cooperate to identify and choose options to eliminate, prevent, or control workplace hazards; A plan is established to ensure that control measures are implemented, interim measures are applied, the progress is monitored, and the effectiveness of the implemented control measures is evaluated.
Education and Training	<ul style="list-style-type: none"> All workers are trained to understand how the program works and how to effectively carry out the responsibilities that have been assigned to them by this program; All workers are trained to recognize workplace hazards and understand the implemented control measures.
Program Evaluation and Improvement	<ul style="list-style-type: none"> Control measures are periodically evaluated for their effectiveness; Processes are in place to monitor the program's performance, verify its implementation, identify the deficiencies and opportunities for improvement, and take the necessary actions to improve the program and performance in HSEQ.
Coordination and Communication on a Multi-Employer Construction Site	<ul style="list-style-type: none"> Workers are informed of the risks specific to the construction site where they have been assigned and participate in any orientation session; The client's workers and the subcontractor's workers are informed of the dangers inherent in the workplace and potentially created by the work to be done.

1.5 Responsibilities of the Management Committee

Members	<ul style="list-style-type: none"> President and Chief Executive Officer Advisor to Management Executive Vice-President Vice-President — Finance and Administration Vice-President — Operations Vice-President — Sales
Mandate	<ul style="list-style-type: none"> Set guidelines and objectives; Standardize practices; Develop and approve procedures and work rules; Present corrective action plans following incidents; Share initiatives and promote emulation; Take action on the recommendations made by the Joint Committee – Construction site HSEQ; Take action on the clients' HSEQ requirements.

1.6 Responsibilities of the JCHSEQ (French abbreviation: CPCSSEQ)

JCHSEQ: Joint Committee – Health, Safety, Environment, and Quality.

Workers	<ul style="list-style-type: none"> • Crane operator — Eastern Quebec • Crane operator — Northern Quebec • Crane operator — Greater Montreal • Crane operator — Southern Quebec • Truck driver • Field mechanic
Employers	<ul style="list-style-type: none"> • Sales representative • Technical supervisor • Director — Health, Safety, Environment and Quality • Coordinator — Health, Safety, Environment and Quality
Mandate	<ul style="list-style-type: none"> • Determine the training programs in regard to OHS; • Choose the most suitable PPE; • Become familiar with the Safety Program, collaborate in its update and monitor its application; • Participate in risk analysis and identification of contaminants and hazardous materials; • Keep records of work accidents, occupational diseases and events that could have caused some; • Entrust specific mandates to committee members; • Receive a copy of incident notices, investigate the events and submit appropriate recommendations; • Receive suggestions and complaints made by the workers, the certified association and the employer, take them into consideration, conserve them and respond to them; • Receive and take into consideration the recommendations made by the prevention representatives; • Receive and study the CNESST Site Inspection Reports and the Site Observations Reports ; • Receive and study the statistical information produced by the CNESST or by any other organization; • Perform any other task assigned to them by virtue of an agreement with the employer and workers or the certified association.

1.7 Branch Manager’s Responsibilities

Governance	<ul style="list-style-type: none"> Understand and apply the Safety Program.
Worker participation	<ul style="list-style-type: none"> See to it that all workers under their supervision have the knowledge, training, and skills to perform their work safely; Encourage the involvement of workers in identifying hazards; Work with the sales representative to manage situations that require immediate action.
Hazard identification and risk assessment	<ul style="list-style-type: none"> Identify, report and eliminate incident risks; Act diligently on the situations reported to them; In situations where there is uncertainty with regards to safety standards, validate with the HSEQ department or the Engineering department in order to have the most complete information.
Hazard prevention and control	<ul style="list-style-type: none"> Provide the materials and equipment necessary for the safe execution of work; Ensure that workers have and wear appropriate PPE; Ensure that emergency equipment is available within the equipment and establishments (fire extinguishers, first aid kits, spill kits, etc.).
Education and training	<ul style="list-style-type: none"> Maintain the workers’ training and skills up to date by using the GUAY Academy and other qualification management tools (AS400, Ilogg, Cognibox, etc.); Revise the emergency measures posted in their branch office twice a year.
Program evaluation and improvement	<ul style="list-style-type: none"> Make construction site observations and document them as required; Report incidents (24 hrs) to the HSEQ Director; Investigate incidents, if necessary, in collaboration with the HSEQ department (72 hrs); Apply corrective measures following investigations/observations in order to prevent reoccurrences. <p>* Refer to section 6.3</p>
Coordination and communication on a multi-employer construction site	<ul style="list-style-type: none"> Keep informed of each client’s health and safety instructions; Ensure that the principal contractor’s and client’s general safety measures are known and followed by the workers.

1.8 Responsibilities of the Sales Representatives

Hazard identification and risk assessment	<ul style="list-style-type: none">Analyze and organize the lift (refer to section 3.1).
Hazard prevention and control	<ul style="list-style-type: none">Document and transfer information to the dispatchers by using a service order;Ask for help or advice from the HSEQ department and Engineering department when questioning issues related to work safety.

1.9 Responsibilities of the Engineering Department

Hazard identification and risk assessment	<ul style="list-style-type: none">Provide the lift plans and ground pressure calculations (refer to section 3.2);Assist the branch directors, sales representatives and HSEQ team when there are situations with safety issues to clarify. This assistance could mean accompanying them on construction site visits;If needed, provide documentation relating to these issues.
Hazard prevention and control	<ul style="list-style-type: none">Ensure the conformity of crane accessories (platforms, beams, etc.) through annual inspections.

2. Worker Participation

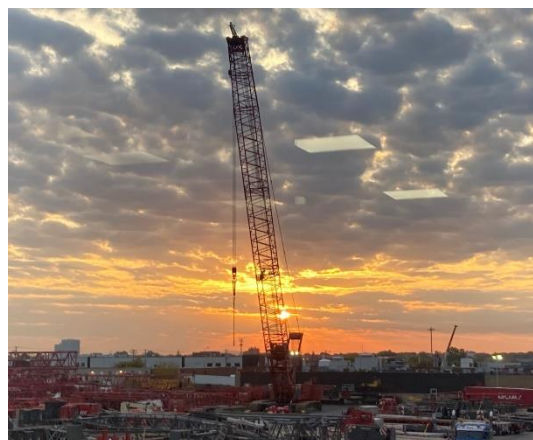
2.1 Responsibilities of the Prevention Representative

Hazard identification and risk assessment	<ul style="list-style-type: none"> Identify the situations that can be a source of danger for workers.
Hazard prevention and control	<ul style="list-style-type: none"> Make recommendations, including those concerning work-related psychosocial risks.
Education and training	<ul style="list-style-type: none"> Assist workers in exercising their rights granted to them by the present law and regulations.
Program evaluation and improvement	<ul style="list-style-type: none"> Observation of the workplace; Accompany the inspector during inspection visits; Intervene in cases where the worker exercises their right of refusal.

2.2 Responsibilities of Any Worker Present on a Construction Site

Worker participation	<ul style="list-style-type: none"> Become familiar with and collaborate in the application of the Safety Program.
Hazard identification and risk assessment	<ul style="list-style-type: none"> To not undertake work that they do not know or do not understand; To not endanger their health, safety and physical well-being nor that of other people; Participate in the identification and elimination of hazards; Consult whom it concerns, when a situation is ambiguous, and it is difficult to assess if the level of risk is acceptable.

<p>Hazard prevention and control</p>	<ul style="list-style-type: none"> • Abide by section 4.6 of this program; Responsibilities specific to crane operators: • Comply with sections 4.2-5 of this program; • Verify that the following documents are available in the crane: <ul style="list-style-type: none"> ○ Logbook (CSTC 2.15.7.4.; CSTC 3.10.1.a)); ○ Annual inspection certificate signed by an engineer; ○ Mechanical inspection certificate signed by the mechanic-inspector dated of 1 year or 300 hours of use; ○ Vehicle registration and travel permit when applicable (refer to GUAY’s Road Safety Management Policy); ○ Immediately notify dispatch if any of the documents are missing. • Complete the following documents (when applicable): <ul style="list-style-type: none"> ○ Trip inspection / Security check; ○ Mobile crane’s logbook (Annex 9.1): <ul style="list-style-type: none"> ▪ Before the first lift of the work shift, carry out the daily inspection and document it. ○ Pre-operational procedure included in the service contract; ○ Malfunction report (Annex 9.2); ○ Jib assembly verification certificate (Annex 9.3).
<p>Education and training</p>	<ul style="list-style-type: none"> • Understand or apply the information transmitted to them through the following communication channels: • Memo; • Display; • Training.
<p>Program evaluation and improvement</p>	<ul style="list-style-type: none"> • Report any incident immediately, or as soon as possible, to the dispatcher; • Complete and sign the Declaration of Event.
<p>Coordination and communication on a multi-employer construction site</p>	<ul style="list-style-type: none"> • Follow and apply the instructions given during the work providers’ orientation training; • Attend the construction site safety meetings, if there are any.



3. Hazard identification and Risk Assessment

3.1 Assessment of the Lifts

The sales representatives are responsible of ensuring the organization and safety of the lift. They must:

- Analyze the level of risk and the pertinence of a construction site visit (refer to GUAY Sales Department – Representative’s Guidebook);
- Collect/verify, as needed, the data listed below:
 - Proposed crane placements;
 - Maximum lift and rotation radii;
 - Anchor points;
 - Ground elevation, slopes, trenches, caves, excavations, embankments;
 - Buried pipes, underground water mains;
 - Waterways, telephone lines and overhead power lines;
 - Other cranes, winches, structures, etc.;
 - Stability and bearing capacity of the ground or any structure that supports the crane;
 - Weight of the load to be lifted, dimensions, center of gravity;
 - Required boom length;
 - Weight of the lifting equipment;
 - Adequate lighting;
 - Adequate signalization;
 - Occupancy permit.

3.2 Lift Plans and Ground Pressure Calculations

The Engineering team works in collaboration with the sales representatives to establish the lift plans and ground pressure calculations as needed.

3.3 Job Safety Analysis

Job safety analyses have been developed for all types of cranes. They are used as a prevention tool on the construction sites (Annex 9.4).

4. Hazard Prevention and Control

4.1 Inspection and Maintenance of the Cranes (CSTC 2.15.1.b) ; CSTC 3.10.1.a) f))

All cranes are inspected, tested, and maintained in accordance with the manufacturer's recommendations and the CSA standard Z-150 chapter 5 requirements. This includes:

- Preventive maintenance program;
- Maintenance tracking;
- Mobile crane logbook;
- Malfunction report;
- Periodic inspections certificate (300 hours);
- Annual inspection certificate;
- Mechanical inspection certificate;
- Conventional crane and jib assembly verification certificate;
- Pre-operational procedure (included in the service contract).

4.2 Driving/Operating the Crane (CSA Z-150)

4.2.1 Generalities

4.2.1.1 Crane Operators' Qualifications (CSA Z-150 6.1.1)

Mandatory Qualifications	<ul style="list-style-type: none">• Have the relevant training and operating experience for the specific type of equipment (CSTC 3.10.4.1.);• Have adequate knowledge of:<ul style="list-style-type: none">○ Construction of the crane (electric, hydraulic, etc.);○ Safety codes and standards that touch upon crane operating.
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4.2.1.2 Before Use (CSA Z-150 6.1.2)

Precautions to take for the safety of the public, properties and workers	<ul style="list-style-type: none"> Take notice of the location of the crane, the lift radius and rotation radius, the anchor points, the ground elevation, the slopes, the power lines, the other cranes, etc.; Ensure the stability and load-bearing capacity of the ground or any structure supporting the crane.
Ground, foundation, or support structure	<ul style="list-style-type: none"> Take the necessary precautions to validate the bearing capacity of the ground: <ul style="list-style-type: none"> Consider operating conditions and stationary conditions. The safety parameters must be established according to the most difficult conditions.
Crane positioning	<ul style="list-style-type: none"> Means shall be provided to keep the public outside of the crane's operating quadrants, when possible.
Construction site with several cranes (CSA Z-248 8.10.3)	<ul style="list-style-type: none"> If the work areas of a tower crane and a mobile crane overlap: <ul style="list-style-type: none"> Position the mobile crane so that the crane operators can see each other in the overlapping area; If a tower crane is not operated (left weathervaned), it will be necessary to plan an operator for this crane. Work procedures and communication procedures must be established. <p>**** See GUAY's guideline 4.5 Communication Between the Tower Crane and the Mobile Crane.</p>

4.2.1.3 Assembly and Disassembly Method (CSA Z-150 6.1.5)

Manufacturer's instructions and operating manual (CSTC 3.10.1.g) (CSTC 3.10.1.h)	<ul style="list-style-type: none"> Follow the manufacturer's instructions, unless a different procedure has been approved by an engineer; Take note of the procedures in the operating manual available on the crane: <ul style="list-style-type: none"> No deviation allowed — no substitution of parts or materials, unless approved by the manufacturer or an engineer.
Crane equipped with stowaway jib (CSTC 2.15.7.2.)	<ul style="list-style-type: none"> Extend and retract the boom according to the manufacturer's instructions.
Lattice Booms (CSTC 2.15.7.2.)	<ul style="list-style-type: none"> Only use sections that are compatible with the crane model: <ul style="list-style-type: none"> Check that they are not bent, dented or have broken welds; Only use bolts and pins of the size and quality prescribed; Assemble in the proper order in accordance to the manufacturer's instructions.
Outriggers (CSTC 2.15.7.2.)	<ul style="list-style-type: none"> Deploy the outriggers as prescribed by the manufacturer.
Leveling (CSTC 2.15.7.2.)	<ul style="list-style-type: none"> Level the crane as prescribed by the manufacturer.
Boom suspension by metal cables (CSTC 2.15.7.2.)	<ul style="list-style-type: none"> Securely support assembled or disassembled booms, with or without boom harness support, to prevent them from falling; Prohibit anyone from standing under a boom section when depositing the boom (even to remove the remaining pins).

Competent person	<ul style="list-style-type: none"> The assembly/disassembly process must be led by a competent person who understands the methods for the crane in question; They must review these methods immediately before the assembly/disassembly begins unless they understand the method and have applied it previously to the same type and configuration of equipment (including accessories).
Members of the team	<ul style="list-style-type: none"> The competent person ensures that the team members understand their tasks, the hazards associated with those tasks, and the dangerous positions/locations that need to be avoided.
Places that are out of the crane operator's eyesight	<ul style="list-style-type: none"> If a member must go somewhere (that is in, on, or under the equipment or load) out of the crane operator's eyesight, they must inform the operator beforehand: <ul style="list-style-type: none"> The crane operator must not move any part of the equipment (load) until that person is in a safe place. If there is a possibility of encroaching on a power line and the minimum safe approach distance (MSAD), the employer must endeavor to make the assembly/disassembly at a distance beyond that which could lead to contact with the power line.

4.2.1.4 Assembly and Disassembly of Lattice Booms (CSA Z-150 6.1.6)

Boom support and attachment	<ul style="list-style-type: none"> Booms assembled/disassembled on the ground, with/without support of the boom harness, must be blocked in such a way as to prevent them from falling and injuring personnel; The size, quantity, condition and method of stacking chocks must be sufficient to support the loads and maintain stability.
Auxiliary crane	<ul style="list-style-type: none"> If an auxiliary crane is used: <ul style="list-style-type: none"> Verify that the rigging attachment points are appropriate to prevent structural damage and ensure safety; Identify the location of the center of gravity to prevent any dangerous unintended movement or take measures to control these movements.
Competent person (CSA Z-150 6.1.6.3.)	<ul style="list-style-type: none"> Monitor and deal with hazards associated with the work, notably: <ul style="list-style-type: none"> Ground condition; Stability of components when removing the pins; Do not allow the suspension cable and tie rods to snag on the connecting pins of the boom or jib; Etc.

Boom section removal	<ul style="list-style-type: none"> • Follow the manufacturer’s specifications; • Do not allow people under the boom to remove the remaining pins; • Do not remove the pins from the tie rods when the tie rods are tense; • Do not remove the boom section pins between the tie rod attachment points and the body of the crane/derrick when the tie rods are tense; • Do not remove the boom section pins between the highest boom section and the body of the crane/derrick when the boom is supported by the upper boom section which rests on the ground/support; • Do not remove the boom section pins located on the cantilever portion of the boom being removed until the cantilever section is entirely supported.
Inspection to ensure compliance	<ul style="list-style-type: none"> • Inspect to ensure compliance with manufacturer’s instructions.

4.2.2 Dangerous Equipment (CSA Z-150 6.2)

Defectiveness	<ul style="list-style-type: none"> • Immediately remove from service any crane deemed unsafe.
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4.2.3 Weather Conditions (CSA Z-150 6.3)

Prohibited (CSTC 3.10.1.e)	<ul style="list-style-type: none"> • No crane may be assembled, disassembled, or used when the weather conditions can constitute a danger to workers, the public, or property.
Temperature	<ul style="list-style-type: none"> • Respect the minimum ambient temperatures required by the manufacturer: <ul style="list-style-type: none"> ○ Remove any ice or snow from the crane or loads.
Violent winds	<ul style="list-style-type: none"> • Comply with the manufacturer’s requirements: <ul style="list-style-type: none"> ○ Capacity reduction; ○ Wind speed limit for the lifting of loads with a large surface area. • Consider the shape and dimension of the loads to determine if their maneuvering poses a danger.
Snow, fog, rain, darkness	<ul style="list-style-type: none"> • Strictly monitor maneuvers when the crane operator’s sight is hindered by the elements.
Shock	<ul style="list-style-type: none"> • Make sure that no part of the structure is subjected to shock loading or direct shocks: <ul style="list-style-type: none"> ○ Especially at low temperatures.

*** See GUAY’s guideline - 4.5 Lightning & 4.5 Ice.

4.2.4 Crane Use Practices

4.2.4.1 General Practices (CSA Z-150 6.4)

Capacity (CSTC 2.15.1 à 5)	<ul style="list-style-type: none"> Respect the crane's capacity; use the counterweights as prescribed by the manufacturer.
Stability	<ul style="list-style-type: none"> Do not use on an uneven surface or on a slope unless precautions have been taken under the direction of a competent person.
Securing the work area	<ul style="list-style-type: none"> Prevent anyone from climbing onto, staying on, or getting down from the crane when it is in motion or in operation (CSTC 2.15.6.6.; CSTC 3.10.6.1.); Barricade the access if an obstruction is less than 60 cm away from the crane; Delineate a safety zone where the crane is operational (CSTC 3.2.5.): <ul style="list-style-type: none"> Restrict access within the swing radius of the crane, unless authorized by the person in charge; Prohibit passage under the load (CSTC 3.10.4.4.).
Flammable materials (CSTC 4.4.3.)	Service station (petrol, diesel): <ul style="list-style-type: none"> Respect the No Smoking rule; Use compliant storage containers; Stop the motor (CSTC 3.10.1.d)); Verify that unshielded lights, flames, or spark-generating devices are at a distance.
Carbon monoxide (RSST 41.)	<ul style="list-style-type: none"> Do not operate equipment with an internal combustion engine indoors or in an excavated area unless adequate ventilation is installed.

Precautions to take	<ul style="list-style-type: none"> • Get to know the equipment; • Validate that all the components are present and functional (CSTC 2.15.1.c): <ul style="list-style-type: none"> ○ Have any defective controls or safety devices repaired; ○ Notify the next operator of any anomaly. • Be responsible for the people who work directly under your orders; • Respect the warning indication affixed to the key or to the ignition controls, until the indication is removed by the person who put it on; • Verify that the crane is still levelled before using it; • Use the crane in its most stable position and within its maximum capacity range; • Calculate the mass of the loads and determine if they are within the capacity limits; • Do not do something that could distract your attention from driving; • Have a clear and unobstructed view of the load and the work area before starting the maneuver, or wait to receive instructions from the signal person (CSTC 3.10.5.2); • Avoid abrupt maneuvers: <ul style="list-style-type: none"> ○ The speed of rotation must not cause the load's center of gravity to oscillate beyond the radius circumscribed by the boom's extremity. • Know the hand signals: <ul style="list-style-type: none"> ○ Always obey a signal to stop, no matter who gives it (CSTC 3.10.5.4); ○ Do not leave the controls unattended while a load is suspended (CSTC 3.10.4.5.c)). • Lattice boom machine: use the Controlled Boom Lowering mechanism; • Continually monitor the cable on the winch to detect any anomaly.
In case of equipment failure	<ul style="list-style-type: none"> • Secure the load; • Follow the manufacturer's procedures.
Secondary hoist line	<ul style="list-style-type: none"> • Do not use a secondary hoist line to support a load while the primary hoist line is in use, unless permitted by the manufacturer: <ul style="list-style-type: none"> ○ The allocation of the loads between the two hoist lines must respect the limits established by the manufacturer.

4.2.4.2 Crane Left Unattended (CSA Z-150 6.4.2)

Operation to carry out	<ul style="list-style-type: none"> • Place the load on the ground (material or slinging that is not part of the crane); • Apply the brakes and activate the locking mechanism; • Block the crane to prevent any accidental translational motion and any unintended movement; • Stop the crane in accordance with the manufacturer's instructions; • Lock the doors. <p>****See GUAY's guideline - 4.5 Unattended (Crane and Tractor)</p>
Wind	<ul style="list-style-type: none"> • Tie-down the crane as specified by the manufacturer to withstand winds, taking into account weather forecasts and the length of time it will be left unattended.

4.2.4.3 Maneuvering Loads (CSA Z-150 6.4.3)

Leveling	<ul style="list-style-type: none"> Level the rotating part of the superstructure.
Unknown mass	<ul style="list-style-type: none"> If the mass of the load is not precisely known, the crane operator together with the person supervising the operations must ensure that the mass does not exceed the rated capacity of the crane at the maximum radius intended for the move/lift.
Outriggers	<ul style="list-style-type: none"> When used, deploy them according to the manufacturer’s specifications; If they are not deployed to their full length: <ul style="list-style-type: none"> This practice must be approved by the manufacturer; Outriggers must be locked in equal positions that match the load/capacity charts provided by the manufacturer: <ul style="list-style-type: none"> Only load charts that correspond to these outrigger positions should be used for the operations in question. Unequal positions: the load charts that correspond to each of the work quadrants must be used; If it is not possible to lock the outriggers in positions that correspond to the locations established by the load/capacity charts, the manufacturer must be consulted to determine whether to limit the capacities or use special procedures. <p>***See GUAY’s guideline - 4.5 Uneven outriggers</p>
Hoisting cable	<ul style="list-style-type: none"> Do not wind the hoisting cable around the load; Never allow folds to form; Verify that the strands from multiple sheaves do not wrap around each other; If the cable is slack, verify that it is well wound on the winch drum and supported in the pulleys before resuming the maneuver; Make sure that the cable does not pass over a pulley’s guard pin.
Load Control	<ul style="list-style-type: none"> Align the hoisting cable above the load’s center of gravity (CSTC 2.15.6.2.): <ul style="list-style-type: none"> Take into account the boom deflection at the moment of lifting the load; Control the swing of the load when moving it. Verify that the load is properly rigged (CSTC 2.15.6.1.; CSTC 2.15.6.6); Keep control of the load at all times. If a person’s safety can be compromised by the load’s rotation, use guide ropes (CSTC 2.15.6.4.); Stabilize loads that are at risk of tipping, sliding or not leveled, before removing the hooks and slings, block them if needed; Use the Controlled Boom Lowering mechanism for more precision.

4.2.4.4 Maneuvering Aid (CSA Z-150 6.4.4)

Malfunction	<ul style="list-style-type: none"> • Verified masses, measured radii, load/capacity tables and the manufacturer’s instructions must take precedence over maneuvering aids; • When a maneuvering aid is not functioning, follow the recommendations of the crane manufacturer, or of the defective device manufacturer, to find out if the operations can be continued and how, or if they must be completely stopped until the repair: <ul style="list-style-type: none"> ▪ Do not lift personnel if a maneuvering aid is not functioning. • In the absence of such recommendations: <ul style="list-style-type: none"> ▪ Re-calibrate or repair as quickly as possible; ▪ Malfunction of the load indicating device, the load moment system, the rated capacity limiter CSTC 2.15.7.2.2.: <ul style="list-style-type: none"> • Establish a way of determining the masses of the loads. ▪ Malfunction of the boom angle indicator or radius indicator: <ul style="list-style-type: none"> • Measure the radii and the angles. ▪ Malfunction of the anti-two-block device (CSTC 2.15.7.2.1.): <ul style="list-style-type: none"> • Ensure an equivalent security (ex.: an additional person). ▪ Malfunction of the boom length indicator: <ul style="list-style-type: none"> • Establish a procedure for performing the lift. ▪ Malfunction of the level indicator: ▪ Find another way to level the crane while respecting the manufacturer’s limits.
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***See GUAY’s guideline - 4.5 Maneuvering aid device & 4.5 Range limiting device

4.2.4.5 Multi-Crane Lift - Tandem (CSA Z-150 6.4.5)

Lift plan	<ul style="list-style-type: none"> • Plan the multi-crane lifts in detail; • A single competent person must direct the operation. They must: <ul style="list-style-type: none"> ○ Analyze the details and indicate the positioning of the cranes, the rigging and the movements to make; ○ Ensure the means of communication between the crane operators and the signal persons; ○ Develop and communicate the sequences of operations to the crane operators / signal persons; ○ No deviation from the work method should be tolerated; <ul style="list-style-type: none"> ▪ In the event of an unforeseen situation, stop and only resume when all the changes have been approved and documented. <p>*** Definition of a competent person:</p> <ul style="list-style-type: none"> • A person who, by obtaining a diploma or a recognized certificate of professional level, or by their vast knowledge, their training and experience, has demonstrated in a tangible way that they can solve the problems relating to the field, and who is familiar with the provisions in this standard which applies to the field and their application.
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***See GUAY’s guideline - 4.5 Tandem with a third party’s equipment

4.2.4.6 Translational Motion/Displacement of the Crane (CSA Z-150 6.4.6)

Procedure	<ul style="list-style-type: none"> Establish a procedure for displacing the crane in accordance with the manufacturer's recommendations.
Ground	<ul style="list-style-type: none"> Compensate for ground irregularities by reducing the lifting capacity: <ul style="list-style-type: none"> This will produce additional loads. If possible, avoid moving a load on a slope, unless deemed acceptable by the manufacturer.
Tires	<ul style="list-style-type: none"> Comply with the tire pressure specified by the manufacturer.
Operator and signal person	<ul style="list-style-type: none"> If more than one operator, one of the operators drives and the second operator acts as a signal person and walks ahead of the load to prevent any danger.
Boom	<ul style="list-style-type: none"> Carry the boom in a straight line in the direction of the movement; Do not transport the boom at an angle where it can tilt backwards; Support the lattice boom only by the tie rods during translational motion.
Load (CSTC 2.15.3.)	<ul style="list-style-type: none"> Keep the load as low as possible; Avoid abrupt stops and starts; Use restraint cables to control the sway.

****See GUAY's guideline - 4.5 Crane displacement on a Construction Site.

4.2.4.7 Crossing Over Slopes (CSA Z-150 6.4.7)

Crane	<ul style="list-style-type: none"> Tie-down the crane if the slope is steep or the ground conditions are dangerous (to prevent it from sliding down the slope in the event of a mechanical failure).
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****See GUAY's guideline - 4.5 Crane displacement on a Construction Site.

4.2.4.8 Lifting People (CSA Z-150 6.4.8)

Generalities (CSTC 3.10.7.)	<ul style="list-style-type: none">• Allow the use of a crane with a platform device intended for the lifting of people only if no other means is possible;• Hold a meeting so that each worker is instructed on the requirements, restrictions and dangers associated with the lift;• Observe the manufacturer’s instructions relevant to the lifting of people;• Do not displace the crane when there is someone on the platform (CSTC 3.10.7.f);• Do not use the crane for any other purpose than lifting personnel as long as there is someone on the platform;• Prohibit the lifting of people when there is:<ul style="list-style-type: none">○ Winds over 25 km/h (7 m/s);○ The possibility of a thunderstorm;○ Snow, ice or other weather conditions that may compromise their safety.• Provide a means of communication between the crane operator and the person on the platform (CSTC 3.10.7.g);• Provide sufficient lighting;• Restrict the number of workers on the platform to 5 (CSTC 3.10.7.2.b));• Require each worker to wear a harness CSTC 3.10.7.2.c);• Know the rescue/evacuation procedure, if applicable.
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4.2.4.8.1 Requirements Relating to the Platform

Generality	<ul style="list-style-type: none"> Comply with the CSA Z150 standard (CSTC 3.10.7.3.).
Additional Requirements concerning suspended platforms	<ul style="list-style-type: none"> Be equipped with a second support link affixed to a point above the hook, which does not interfere with the other components (cable, traveling block, etc.) (CSTC 3.10.7.4.c)); Be equipped with all the wire rope, shackles, and other rigging hardware capable of supporting at least ten times the maximum intended load applied or transmitted to each component, without exceeding the nominal load capacity of the lifting accessories. (CSTC 3.10.7.4.b) ii.); Be equipped with bridles and associated rigging for attachment to the hoist line that are identified and used only for the purpose of lifting or lowering workers; Be equipped with compliant fall protection anchors for the personnel CSTC 3.10.7.2.c); Verify that the inclination of the floor does not exceed an incline of 1/5 in the worst loading conditions (CSTC 3.10.7.4.b) i.).

4.2.4.8.2 Requirements Relating to Cranes

Generalities	<ul style="list-style-type: none"> The load should not exceed half of the crane's rated capacity (CSTC 3.10.7.2.d); Have a boom with a safety system that prevents it from free-falling or being retracted or lowered unintentionally.
Cranes with a suspended platform	<ul style="list-style-type: none"> Be equipped with a anti-two-block device; Have self-locking hooks on the slings; Be equipped with a hoist cable capable of lifting at least 10 times the load; If it is equipped with a secondary hoist line, dismantle it or place it in such a way as to not endanger the people who are working on the platform; Use an assisted descent winch to support the platform.
Cranes with a platform directly affixed to the boom	<ul style="list-style-type: none"> Be equipped with a means to keep the platform levelled; Have the hoist cable removed from the boom's pulley or placed in such a way as to not endanger the platform's occupants or interfere with the crane's operation.

4.2.4.8.3 Assembly and Maneuvers

Generalities	<ul style="list-style-type: none"> Perform a test lift; As long as the platform is occupied in an elevated position, remain at the controls of the crane at all times.
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Test lift	<ul style="list-style-type: none"> • Verify the integrity of the rigging, the platform, all the systems, the safety devices and the lift trajectory before the operation: <ul style="list-style-type: none"> ○ Suspend the platform on the 2nd support, lift it 1 meter from the ground; ○ Suspend the platform on the 1st support, lift it 1 meter from the ground; ○ Suspend the platform on the 1st support, perform the lift trajectory using a maximum of 50 % of the capacity written in the crane’s load rating chart; • Perform the test lift with a platform ballasted with its maximum nominal load, but without anyone on the platform: <ul style="list-style-type: none"> ○ Remove this load when the time comes to lift people.
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4.2.4.9 Usage in Proximity of Electrical Lines (CSA Z-150 6.4.9)

Minimum Safe Approach Distance (MSAD)	<ul style="list-style-type: none"> • Respect the minimum safe approach distances defined in appendix 9.5 (CSTC 5.2.1.); • If it is possible for the load, the cable or a part of the crane to encroach on the MSAD, refer to section “4.4 Rules Specific to the Safety Code for the Construction Industry (CSTC)” of this program to understand the instructions in the CSTC about this subject.
In case of contact	<ul style="list-style-type: none"> • Stay inside the cabin if possible; • Warn all the other workers to stay away from the machine and the load; • Try, without anyone’s help, to place the boom well away from the power line; <ul style="list-style-type: none"> ○ If the boom cannot be repositioned, stay inside until the electric company cuts the circuit. • If the crane operator decides to get out: <ul style="list-style-type: none"> ○ No part of the body can come into contact with the ground while another part of the body is still in contact with the machine.

4.2.4.10 Signaling (CSA Z-150 6.5.2)

Generalities CSTC 3.10.5	<ul style="list-style-type: none"> • Verify that the signal person is competent; • Position the signal person so that they are visually easy to spot; • Maintain a continuous communication between crane operator and signal person during all of the crane’s movements. If the communication is interrupted, stop all movement; • In case of doubt, stop and come to an agreement with the signal person; • If the crane operator needs more instructions than those provided by the signaling system, they must stop the crane’s movement.
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Competence of the signal person CSTS 10.3.2.	<ul style="list-style-type: none"> • Know the basics of how a crane works and its limits; • Know the hand signals (if signaling is done by signals); • Know the methods of signaling by voice (if signaling is done by voice).
Standard hand signals CSTC 3.10.5	<ul style="list-style-type: none"> • See Appendix 9.8; • Position the signal person so that they are visible to the crane operator at all times; • Have an integral view of the intended travel path of the load and the machine all the while staying out of that path.
Common voice signals	<ul style="list-style-type: none"> • The signals must be reviewed; • The communication equipment must be tested: <ul style="list-style-type: none"> ○ Spare batteries available; ○ Dedicated channel or spread spectrum. • The directions of the movement, in all the signals given to the crane operator, must be given to them from their point of view; • Each set of signals must include the following three elements given in order: <ol style="list-style-type: none"> 1. Function and direction; 2. Distance or speed; 3. Halt of the function. • The person directing the operations must consider the complexity of the lift before allowing the use of signals for several simultaneous functions of the crane.

4.2.4.11 Transport of Cranes and Components (CSA Z-150 6.5.7)

Generality CSTC 3.10.6.	<ul style="list-style-type: none"> • Exercise great caution when going up or down the loading ramp to avoid tipping the crane; • Respect the specified maximum slope: <ul style="list-style-type: none"> ○ Tie-down the crane onto the transport vehicle to prevent it from moving; ○ Secure and properly support the boom sections; ○ Provide some space between the boom and the carrier to take into account movements during transport. ○ Secure the superstructure so that it cannot rotate; ○ Secure the hook in such a way that it does not rotate freely.
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4.3 Tower Cranes (CSA Z-248)

4.3.1 Design and Construction (CSA Z-248 4.)

Evaluation criteria of the design (CSTC 2.15.7.4.)	<ul style="list-style-type: none"> • For tower cranes, the load, resistance and stability conditions for the various constraints must equal or exceed those prescribed in the articles of the “<i>Rules for the Design of Hoisting Appliances</i>”, by the FEM*, which are stated in article 1, passage 1.001; • Any modification must be established by an engineer or the manufacturer in accordance with passage 1.001 of the FEM’s rules. <p>*FEM : European Materials Handling Federation</p>
Load-rating plate (CSTC 2.15.5.)	<ul style="list-style-type: none"> • Be placed and lighted as to be easily read by the operator; • Contain information which complies with that provided by the manufacturer; • Provide all the information needed for the operation of this equipment.

4.3.2 Assembly, Disassembly and Hoisting (CSA Z-248 5.)

Crane assembly team	<ul style="list-style-type: none"> • Be made up of qualified personnel capable of: <ul style="list-style-type: none"> ○ Planning the construction site; ○ Using the appropriate equipment to perform a safe assembly (shearleg or mobile crane); ○ Interpreting the installation plans and the assembly, disassembly and hoisting processes; ○ Knowing how to inspect the elements before the installation or dismantling; ○ Knowing the assembly and disassembly sequences; ○ Using the appropriate means of communication; ○ Having recognized training in Fall Protection and in Rescue at Height. • Led by a team leader and a crane supervisor with experience and skills in all the phases of assembly, disassembly and hoisting of cranes.
Assembly plans (CSTC 2.4.1.3.)	<ul style="list-style-type: none"> • Send the installation plans to the CNESST, including the disassembly procedure, signed and sealed by an engineer (responsibility of the employer/crane renter).

4.3.3 Inspection, Testing (CSA Z-248 6.2)

Generality	<ul style="list-style-type: none"> • Inspected, tested and maintained in accordance with manufacturer’s recommendations.
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<p>Logbooks (CSTC 2.15.7.4.; Schedule 10)</p>	<ul style="list-style-type: none"> • Owner: <ul style="list-style-type: none"> ○ Kept up-to-date in order to provide the means to establish and conserve a detailed and complete historical record of use for each engine; ○ Considered an integral part of the crane; ○ Constantly available to the authority’s inspectors; ○ Document in detail the tests (non-destructive or otherwise), the inspections, the repairs and maintenance work performed; ○ Document in detail all the incidents, damages and repairs related to the incident. • Crane operator: <ul style="list-style-type: none"> ○ Keep them up-to-date in order to conserve a historical record of the use of the crane and its current location; ○ Designed to provide information in a logical and chronological order; ○ Mention the name of the person who installed the rigging as well as the date of installation.
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4.3.4 Safe Usage (CSA Z-248 8.)

4.3.4.1 General Provisions

<p>Selection</p>	<ul style="list-style-type: none"> • Take into consideration the following factors: <ul style="list-style-type: none"> ○ Rated capacity; ○ Maximum range; ○ Maximum allowable wind load, wind speed which exerts pressure on the load; ○ Maximum mass and the dimensions of each component of the crane; ○ Assembly and disassembly method; ○ Nature of the crane (with luffing jib, static saddle jib or articulated jib); ○ Possibility of displacement (ex. : tower crane on rails); ○ Power supply; ○ Self-supporting height allowed above the base and the wind bracing; ○ Importance of the additional loads exerted by the wind bracing and the capacity of the building or structure, to which the crane is attached, to support these loads; ○ Permissible distance between the intermediate wind braces.
<p>Location</p>	<ul style="list-style-type: none"> • Evaluate the following conditions of use: <ul style="list-style-type: none"> ○ Ground conditions; ○ Assembly/disassembly areas; ○ Space required for the boom; ○ Nearby hazards; ○ Cooperation of the owners of neighbouring buildings in terms of scheduling and rights relating to the property above.

4.3.4.2 Crane Operators

Authorisation	<ul style="list-style-type: none"> Operated only by qualified persons, trainees under the direct supervision of a qualified person, personnel responsible for the assembly/disassembly, the inspection, the maintenance, of testing, when the execution of their tasks require it; No other person should enter the cabin.
Qualifications	<ul style="list-style-type: none"> Posséder la formation et l'expérience dans la conduite du type particulier de l'équipement à manœuvrer ; Possess the qualifications required by the competent authority; Have a general knowledge of construction, electrical, hydraulic, and mechanical systems, professional jargon, the equipment parts and general maintenance required as part of their work.
Visual and auditory acuity	<ul style="list-style-type: none"> Have sufficient visual and auditory acuity, corrected or not.

4.3.4.3 Responsibilities of the Crane Operator

Generalities	<ul style="list-style-type: none"> Do not lift any load that you deem unsafe; Become familiar with the manufacturer's manual (equipment, operations, maintenance); Operate the crane in accordance with the manufacturer's instructions or the specifications of an engineer; Be on site during assembly, repair, hoisting or telescoping of the crane (meaning that a crane operator must be on site); Use the safe means of access to get to the cabin or to the areas that must be inspected and maintained.
Pre-commissioning inspections and tests	<ul style="list-style-type: none"> Inspect the crane before the work shift and complete the logbook; Test the controls and the safety devices at the start of every work shift: <ul style="list-style-type: none"> The limiter of force exerted on the sling can be verified at the time of initial setting; If there is a malfunction, have it repaired before starting work.
Limiters and safety devices	<ul style="list-style-type: none"> Set/repaired only by qualified persons; Do not use them instead of the normal stopping operation; Do not operate a crane which has a malfunctioning overload limiter, unless under the supervision of a qualified person and with the authorization of the manufacturer or an engineer.
Power supply	<ul style="list-style-type: none"> Put all the controls in their stopped position before turning off the switch or before starting the equipment; Do not close the circuit or open it if there is a warning on the switch; Engine failure : follow the manufacturer's recommendations; in the absence of such recommendations: <ul style="list-style-type: none"> Activate the brakes of the trolley, the winch, of translational motion, and activate the locking devices, if applicable;

	<ul style="list-style-type: none"> ○ Put the clutches or other controls in the STOP or neutral position; and ○ If possible, lower the load to the ground by applying the brakes.
Load maneuver	<ul style="list-style-type: none"> ● Respect the rated capacity of the crane as assembled; ● If the weight of the load is unknown, the person responsible for the lift must ensure that it does not exceed the rated characteristics of the crane at the lift radius of the load.
Special lifts greater than the rated capacity	<ul style="list-style-type: none"> ● A tower crane must not be used to lift a load that exceeds the rated capacity, except for the purpose of load testing, without the knowledge and authorisation of the crane manufacturer, or an engineer in the absence of the manufacturer, and only under the supervision of a qualified person.

4.3.4.4 Rigging of the Load

Control of the load	<ul style="list-style-type: none"> ● Rigged to the crane by a qualified person; ● Rigged to prevent a part from falling off; ● Use stabilizer cables or guide ropes as needed; ● Lower the loads safely to the ground and block them in place before detaching the hooks and slings.
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4.3.4.5 Suspension of the Load

Prohibited	<ul style="list-style-type: none"> ● Do not leave a load suspended without the crane operator's supervision; ● Avoid maneuvers above workers; ● Do not transport personnel with the hook, the load, or a sling suspended from the crane.
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4.3.4.6 Moving the Load

Generalities	<ul style="list-style-type: none"> ● Do not use the crane to drag loads; ● Do not apply horizontal traction force on the crane; ● Do not apply vertical traction force on the crane by lifting a load that is restrained (frozen or bolted loads); ● Verify that the lift and rotation trajectory is free of any obstacle; ● Verify that neither the load nor the hoisting cable encounters an obstacle; ● Do not allow the metal cables from a multi sheave cable block to come into contact with one another; ● Do not swing the load (no sudden stops or starts for the lift, the rotation of the boom, the translational motion of the load or of the crane); ● In the event of a slack cable, ensure that it is properly placed on the drum and in the pulleys when it is put under tension again; ● Do not lower the load or boom to a level lower than the point where there is only 3 full turns of the cable remaining, or the number stipulated by the manufacturer.
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4.3.4.7 Unattended Crane

Decommissioning procedure	<ul style="list-style-type: none"> Comply with the manufacturer’s instructions or those approved by an engineer; Weathervane the crane, unless the manufacturer or an engineer has stipulated provisions to prevent the crane from rotating freely in the wind; Tower cranes with luffing jib: the manufacturer’s or engineer’s instructions must be followed as to the angle of the jib to be maintained.
Warning lights	<ul style="list-style-type: none"> Install warning lights on the tower, the boom or the jib and turn them on when needed.
Translational motion brakes	<ul style="list-style-type: none"> Prevent all unwanted translational motion.
Interruption of the power supply	<ul style="list-style-type: none"> Put all the controls in the STOP or neutral position and check that no one is in the nearby vicinity; Verify that all direct or remote controls are locked at the end of operations and that the power supply is cut off by a main switch which can be locked; Install a separate electrical installation if the current must be maintained at night (heating, cabin lighting, etc.); Stop the internal combustion engine, if applicable; Disconnect the main clutch, if applicable; Restrict access to the crane to authorized persons.

4.3.4.8 Communication and Signalling

Designated signal person	<ul style="list-style-type: none"> If hoisting operations must be commanded by signals, the contractor must: <ul style="list-style-type: none"> Provide a qualified signal person; Make that person visible by a particular means of identification; Assign that person to the crane work. Obey only the signal person, except for the signal to stop; The signal person must be able to deny access to the work area to any person who has no need to be there.
Hand signals	<ul style="list-style-type: none"> Display the hand signals on the construction site, unless a voice communication system is used; Move the crane only in response to a signal; Maintain continuous contact with the signal person; Obey a signal to stop given by any person.
Radio communication	<ul style="list-style-type: none"> Equipment: Use radio communication between crane operators, riggers or signal persons only for the direction of movements; <ul style="list-style-type: none"> Provide a hands-free type of radio. Interference or interruption: Do not move a load if communication is interrupted; Call signs : Use call signs when it is practical; Control remotely: <ul style="list-style-type: none"> Have the crane operator wear high-visibility clothing; Display that the crane is remote-controlled and that it can move without a crane operator inside the cabin.

4.3.4.9 Special Tasks

Multi-crane lift	<ul style="list-style-type: none"> • Avoid using tower cranes for tandem lifting; • Have the lifting plan drawn up, if applicable.
Operations with an impact	<ul style="list-style-type: none"> • Unless authorized by the manufacturer, a tower crane cannot be used for special tasks (lift with the aid of a magnet, handling a wrecking ball, etc.).

4.3.4.10 Necessary Clearance

Fixed structures	<ul style="list-style-type: none"> • In loaded condition, a clearance between the tower crane and any fixed structure or any obstacle must be maintained, at least: <ul style="list-style-type: none"> ○ 0.3 m — horizontally; ○ 3.3 m — vertically.
Construction site with several cranes	<ul style="list-style-type: none"> • When overlapping, and in all load situations: <ul style="list-style-type: none"> ○ Position the cranes at different heights: <ul style="list-style-type: none"> ▪ 0.3 m horizontally; ▪ 3.3 m vertically. ○ If this is not possible, there needs to be anti-collision devices. • Position the cranes so that each crane operator can see the other cranes; • Communicate all your movements to the other crane operators before carrying out the maneuver: <ul style="list-style-type: none"> ○ Do not perform any maneuver until the other crane operators have responded. • See to it that the parts of the crane and the hoist cables do not collide; • Plan work procedures and communication procedures for the overlapping areas.
Tower cranes or other machinery	<ul style="list-style-type: none"> • If there is overlap in the work areas of a tower crane and a mobile crane and other machinery: <ul style="list-style-type: none"> ○ Position the mobile crane/machine so that the operators can see each other in the overlapping area; ○ If a tower crane is not operated (left weathervaned), it will be necessary to plan an operator for this crane. • Work and communication procedures must be established. <p>* See GUAY's guideline - 4.5 Communication between the tower crane and mobile crane</p>

4.3.4.11 Weather Conditions

Temperature	<ul style="list-style-type: none"> • Stop using the crane when the minimum temperature prescribed by the manufacturer is reached, if it is not specified, the minimum operating temperature is -20°C; • Install a thermometer on each tower crane on a construction site (on the cabin or on the tower).
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Wind	<ul style="list-style-type: none"> • Stop using the crane if: <ul style="list-style-type: none"> ○ The wind speed creates a risk; ○ A particular load cannot be moved safely; ○ The maximum operating speed of the crane is reached (manufacturer): <ul style="list-style-type: none"> ▪ If the manufacturer does not specify it, if the speed surpasses 50 km/h. • Install an anemometer on each tower crane (on the cabin or on the tower); • Take the necessary precautions to counter the effects of the wind: <ul style="list-style-type: none"> ○ Use a stabilizer cable for loads with a large surface area.
Thunderstorms	<ul style="list-style-type: none"> • Stop using the crane when thunderstorms approach close enough to present a danger. <p>***See section 4.5 Lightning</p>
Snow and ice	<ul style="list-style-type: none"> • Carefully remove all excessive accumulation of snow or ice from the boom, counter-jib, and all the limiter devices before using the crane.

4.3.4.12 Visibility

Artificial lighting	<ul style="list-style-type: none"> • Sufficient to illuminate the work area without impairing the crane operator's vision; • Installed only if the natural light is not sufficient.
Blind lift	<ul style="list-style-type: none"> • If the crane operator cannot see the load in any of its positions, two or more signal persons may be necessary to relay the signals to the crane operator.
Poor visibility due to bad weather	<ul style="list-style-type: none"> • Adapt the load movement speed and signaling if visibility is reduced.

4.3.4.13 Lift Near a Live Conductor

Generalities	<ul style="list-style-type: none"> • If it is possible for the load, the cable or a part of the crane to encroach on the Minimum Safe Approach Distance (MSAD), refer to section 4.4 Rules Specific to the Safety Code for the Construction Industry (CSTC).
Security devices	<ul style="list-style-type: none"> • If the crane is fitted with protective cages, insulated shackles or proximity warning devices, these devices must not replace the measures required in section 4.4 Rules Specific to the CSTC.

4.3.4.14 Refueling

Requirements	<ul style="list-style-type: none"> • Use certified portable containers equipped with a spring-closing lid and a flame arrester; • Turn off the engine; • Do not smoke or have an open flame in the refueling area.
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4.3.4.15 Panels and Other Items That Increase Wind Load

Panels and other items	<ul style="list-style-type: none">Do not attach panels or other items that increase the surfaces exposed to wind, unless authorized by the manufacturer or an engineer following a technical evaluation that justifies the additional wind load.
Power supply	<ul style="list-style-type: none">Limit the power supply of the panels or other pieces of equipment added to the crane to 120V;Protect the electrical wiring from damage, as well as for the protection of personnel.



4.4 Rules Specific to the Safety Code for the Construction Industry (CSTC)

4.4.1 Steel Structure Assembly/Disassembly Work (CSTC 3.24)

<p>Telecommunication system (CSTC 3.24.2.)</p>	<ul style="list-style-type: none"> • Guide the maneuver using a telecommunication system that is bidirectional, hands-free, and transmits on a radio frequency dedicated exclusively to the work in progress, and interrupt the work in the event of failure.
<p>Assembly</p>	<ul style="list-style-type: none"> • The principal contractor is responsible of ensuring that the resistance of the ground under the work area is sufficient to support the hoisting apparatus, trucks and loads during the work (CSTC 3.24.8.); • A hoisting procedure must be developed when a load is handled by more than one hoisting apparatus (CSTC 3.24.15.); • Weight of the parts: the weight of each part of a steel structure to be erected must be accessible on the construction site: <ul style="list-style-type: none"> ○ The weight must be indicated on each component exceeding 500 kg (CSTC 3.24.16). • Remote unhooking device: <ul style="list-style-type: none"> ○ The minimum and maximum loading capacities are prominently displayed on the device; ○ When the device is engaged, it locks under the application of the load; ○ It opens only when it no longer supports the weight of the load and a command to open is issued (CSTC 3.24.17).
<p>Disassembly (CSTC 3.24.22)</p>	<ul style="list-style-type: none"> • The work must be carried out according to a plan drawn up by an engineer, containing: <ul style="list-style-type: none"> ○ The disassembly method and sequence; ○ The measures to ensure the stability of the hoisting apparatus and the parts of the structure. These measures must take into account the following elements: <ul style="list-style-type: none"> ○ The load must not exceed 70 % of the hoisting apparatus' capacity, including hoisting accessories, specified in the load rating chart. ○ The weight and the center of gravity of the structure components; ○ Any other relevant measure to ensure the safe disassembling.

4.4.2 Work Above or Near Water

Work above or near water (CSTC 11.1.)	Take note that: <ul style="list-style-type: none"> • The principal contractor must, among other things: <ul style="list-style-type: none"> ➤ Prepare a description of the body of water or stream; ➤ Prepare a description of the work; ➤ The platforms, barges and other boats, specifying their dimensions, their capacity and their respective use. ➤ Prepare a water transportation plan adapted to the specific conditions of the work and the characteristics of the body of water or stream; ➤ Prepare a rescue plan that includes, among other things, the wearing of a life jacket.
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***See GUAY's guideline - 4.5 Quay, pier, bridge, viaduct, dam, slab, multi-storey parking

4.4.3 Work in Proximity of Electrical Lines (CSTC 5.1.)

Exceptions (CSTC 5.1.2.)	<ul style="list-style-type: none"> • This section does not apply to: <ul style="list-style-type: none"> ○ An insulated cable of less than 750 V of the duplex, triplex, or quadruplex assembly type; ○ A consumer or distributor branching less than 750 V; ○ The electrical installation of the consumer.
Possible encroachment of the Minimum Safe Approach Distance	If there is a risk of encroaching on a power line at less than the Minimum Safe Approach Distance, then <u>one</u> of the following conditions must be met: <ul style="list-style-type: none"> ○ The power line has no electrical current; ○ The employer has agreed with the electrical power company on the safety measures to be adopted by means of a written agreement which must be transmitted to the CNESST before the work begins; ○ The crane is equipped with a range limiting device which has two functions: <ul style="list-style-type: none"> ▪ Warning the operator and stopping the equipment from operating so that the Minimum Safe Approach Distance is respected; ▪ Stopping the equipment from operating when the device fails to perform its first function. ▪ The crane operator must have received the manufacturer's training to use this device adequately (CSTC 5.2.c). i.). <p>***See GUAY's guideline - 4.5 Range limiting device</p>
Warning sign (CSTC 5.3.1.)	<ul style="list-style-type: none"> • Install on all cranes, in a place visible to the user, a warning sign that bears the inscription: DANGER — DO NOT APPROACH ELECTRICAL LINES in letters at least 12 mm in height.
Power line of 250 000V (CSTC 5.2.3.)	<ul style="list-style-type: none"> • At less than 30 m from a power line whose voltage exceeds 250 000 V, the following requirements must be met: <ul style="list-style-type: none"> ○ Refueling must be done outside of this zone; ○ Construction equipment on tires must be equipped with an electrostatic link between the metal part and the ground; and ○ When installing or handling a pipe, fence, or metal structure above ground, it must be grounded every 30 m.

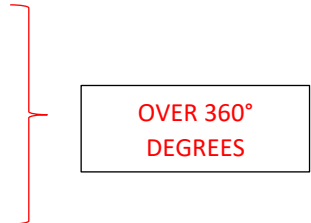
4.5 Crane Driving/Operating (GUAY Supplementary Guidelines)

These guidelines are communicated through company memos and are compiled in this section to ensure their implementation is maintained long-term. These are decisions or clarifications of the different standards or regulations deemed important to include in this program.

DISPLACEMENT

<p>Translational motion or displacement of a crane on a private road</p> <p>Pulling or retaining equipment on a slope</p>	<p>Translational motion/displacement of a conventional/telescopic crane on the following roads:</p> <ul style="list-style-type: none"> ○ Private and passable (open to the public): <ul style="list-style-type: none"> ▪ Ex.: Residential road, shopping center parking lot. ○ Private and not suitable for vehicles (closed to the public): <ul style="list-style-type: none"> ▪ Ex.: Wind farm. <ul style="list-style-type: none"> ● <u>Sales Representative</u>: <ul style="list-style-type: none"> ○ Visit the worksite; ○ Make a request to the Engineering department to verify and transmit the manufacturer’s specifications. Information to provide to them in writing: <ul style="list-style-type: none"> ▪ Road inclinations (measured or the plan received from the client); ▪ Bearing capacity of the route which must be taken by the crane; ▪ Identification of any obstacle along the route (on the ground or in the air); ▪ Crane configuration. ○ Transmit in writing the manufacturer’s specifications received from the Engineering department to the dispatchers. ● <u>Dispatch</u>: Transmit in writing the manufacturer’s specifications to the crane operator; ● <u>Crane operator</u>: verify that specifications are true to the situation encountered. <p>EXCEPTION:</p> <ul style="list-style-type: none"> ● Telescopic cranes of 450 t or less can travel without the involvement of the engineering department, if: <ul style="list-style-type: none"> ○ The main boom is oriented forward and placed in the boom rest; and ○ There are no counterweights on the crane other than those provided for the road configuration; and ○ The ground is not inclined more than 10%; and <ul style="list-style-type: none"> ▪ If the ground is icy or snow-covered, the tires must be fitted with studded chains. <p>Pulling or retaining equipment - if the equipment (crane or truck) must be pulled or retained by another equipment, regardless of the road (private, passable, or not):</p> <ul style="list-style-type: none"> ● <u>Sales Representative</u>: follow the instructions mentioned above and add the following steps: <ul style="list-style-type: none"> ○ Provide written confirmation of the pulling/retaining capacity of the auxiliary equipment; ○ Plan for a delay of two weeks. ● <u>Engineering department</u>: <ul style="list-style-type: none"> ○ Collaborate with a third party to develop the method and provide it to the representative. ● <u>Representative/Dispatch</u>: transmit the method to the crane operator; <p><u>Crane operator</u>: verify that the method responds to the situation encountered.</p>
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<p>Snow-covered or icy roads unsuitable for driving</p>	<ul style="list-style-type: none"> • Snow chains on the wheels are mandatory to use these roads.
<p>Unattended (Crane and Tractor)</p>	<ul style="list-style-type: none"> • Unattended: the motor must be turned off and the doors locked. • Markers framing the notion of “unattended”: <ul style="list-style-type: none"> ○ If the vehicle (crane or truck) is left: <ul style="list-style-type: none"> ▪ Out of your sight; ▪ At a gas station, a restaurant, a truck rest area, on the street. • Situations which could bring a variation to this notion: <ul style="list-style-type: none"> ○ The cold: <ul style="list-style-type: none"> ▪ If there is an auxiliary heater, use it; ▪ If the equipment needs to remain in operation: <ul style="list-style-type: none"> • They must be monitored at regular intervals to avoid breakage. ○ GUAY team only (yard or construction site); ○ The driver leaves the vehicle to get the information concerning where they have to position it.
<p>MANEUVER</p>	
<p>Position of the operator</p>	<ul style="list-style-type: none"> • To operate the crane, the crane operator must position themselves in the cockpit/station intended by the manufacturer; • Set the “CRANE FONTION” to OFF for all other activity in the cabin, to neutralize the controls.
<p>Uneven outriggers</p>	<ul style="list-style-type: none"> • If the outriggers are uneven on either side of the crane, the smallest chart must be used; • If using the larger chart, Appendix C (CSA Z-150) must be used: <ul style="list-style-type: none"> ○ Lift plan must be sent by the engineer of the Engineering department: <ul style="list-style-type: none"> ▪ Use of the range limiting device is required. ○ If the crane has the “Variobase” option, the lift plan is not necessary.
<p>Maneuvering aid device (CSTC 2.15.7.2.1.) (CSTC 2.15.7.2.2.)</p>	<ul style="list-style-type: none"> • When a maneuvering aid device is malfunctioning, the crane operator must stop the work, contact his immediate superior who will decide what to do next, either: <ul style="list-style-type: none"> ○ Repair the crane before continuing the work; ○ Replace the crane; ○ Define the method to follow to complete the work. <ul style="list-style-type: none"> ▪ Refer to section 4.2.4.4.

<p>Range limiting device</p>	<p>Program the range limiting device in the following situations:</p> <ul style="list-style-type: none"> As soon as electrical wires are within the reach radius of the crane: <ul style="list-style-type: none"> Minimum Safe Approach Distance (MSAD) + Length of the boom when fully extended + Length of the jib (if deployed) + ½ of the width of the largest load  <ul style="list-style-type: none"> ATTENTION: <ul style="list-style-type: none"> When the crane is near the electrical wires: <ul style="list-style-type: none"> The programming of the range limiting device must be able to limit the movement of the boom to 1/2 of the length of the largest piece + MSAD; If this cannot be respected then the range limiting device is not an option, it is necessary: <ul style="list-style-type: none"> The electrical wire has no current; or Agree on security measures jointly with Hydro-Quebec (refer to “4.4 Rules specific to the CSTC”). Aerial height limit; Risk of hitting a fixed structure.
<p>Tandem with a third party’s equipment</p>	<p>If the tandem is done with an equipment that does not belong to GUAY, ask for:</p> <ul style="list-style-type: none"> Annual certification of equipment; Chart: <ul style="list-style-type: none"> If the equipment does not have a chart, the lift is prohibited (ex. mechanical excavator).
<p>Use of outrigger pads</p>	<ul style="list-style-type: none"> Always install the outrigger pads supplied with the crane; ALWAYS use steel outrigger pads for: <ul style="list-style-type: none"> Cranes 90 tons and over, truck-mounted; Cranes 110 tons and over, all terrain.
<p>Communication between tower crane and mobile crane</p>	<ul style="list-style-type: none"> Ensure radio communication between the tower crane operator and the mobile crane operator when the latter is within the tower crane’s radius.
<p>Multiple Lift Rigging</p>	<ul style="list-style-type: none"> Multiple Lift Rigging is prohibited: <ul style="list-style-type: none"> Multiple loads on a hook; and “Christmas treeing” loads. ➤ Exceptions: <ul style="list-style-type: none"> A necklace can be made with lightweight ventilation ducts; or A situation approved and guided by the Engineering department.
<p>Lifting cages</p>	<ul style="list-style-type: none"> It is prohibited to enter the cage as long as it remains completely or partially suspended from the crane hook. <p>*Follow the guidelines of “SIP-SSEQ-AM-4-F-V1_Utilisation des cages de déménagement”.</p>

BOOM & JIB	
Jib assembly	<ul style="list-style-type: none"> • Follow the manufacturer's procedure: <ul style="list-style-type: none"> ○ Attention: for the same manufacturer, the procedure may vary from model to model and the same model may vary according to the year of manufacture. • Double check before raising the boom and jib: <ul style="list-style-type: none"> ○ This must be done by all the crane operators. • Complete the folding jib assembly/disassembly checklist.
Boom	<ul style="list-style-type: none"> • Fully retract the boom when leaving at the end of the shift.
WORK ENVIRONMENT	
Work in proximity of railway tracks	<ul style="list-style-type: none"> • Obtain the authorisation of the owner of the railway track you are working near before approaching it or crossing it.
Work in proximity of an airport (Representative's Guidebook)	<ul style="list-style-type: none"> • Sending a crane is conditional upon receiving proof that the client has verified the aerial height limit and that it will be respected during the lifts; <ul style="list-style-type: none"> ○ Exceeding the aerial height limit may result in a fine and the work brought to an immediate halt by the RCMP.
Quay, pier, bridge, viaduct, dam, slab, multi-storey parking	<ul style="list-style-type: none"> • What must be obtained before the work: <ul style="list-style-type: none"> ➢ <u>Ground pressure calculation</u> provided by GUAY's Engineering department; ➢ <u>Bearing capacity</u> of the work area provided by the client: <ul style="list-style-type: none"> ▪ Engineer's plan; or ▪ Written confirmation of where to install the crane. • All the documents must be given to the crane operator: <ul style="list-style-type: none"> ➢ Pressure calculation, bearing capacity confirmation, lift plan, etc.).
Barge (Representative's Guidebook)	<ul style="list-style-type: none"> • Use nautical charts; • Use the operating parameters given by the Engineering department; • Never install a jib (folding, fixed, or luffing).

Crane grounding

- The crane should be grounded under the following conditions due to the possibility of electrostatic induction:
 - In proximity of a high frequency transmitter (antennas);
 - In proximity of a high frequency switching device and high voltage powerline;
 - In case of a high probability of a storm.
- Electrostatic induction is the buildup of static electricity in the crane from a nearby electrical charge. The crane, isolated from the earth by its non-conductive outrigger pads, becomes charged, this “static charge” seeks to return to the earth which can cause a shock to a worker or damage the electronic components of the crane.
- Who does the grounding: authorized and trained specialists.
 - GUAY can provide grounding cables at the customer’s request:
 - The crane operator indicates the grounding connection point on the crane:
 - The crane operator does not make the connection to the earth.
 - Material provided by GUAY:
 - Connection point on the crane;
 - H-H-4/OE-50 cable:
 - H = Universal grounding clamp at both extremities;
 - 4/O = Cable size=4/0 AWG (5H);
 - E = (class K) Excelenen-red opaque;
 - 50 = Length of cable in ft.
 - Certified every 3 years.

TEMPERATURE

Anemometer

- Mandatory installation of an anemometer on any crane when lifting personnel;
- Mandatory installation, if available on the equipment:
 - Halt the work from the moment:
 - Wind speed exceeds the operating parameters:
 - For longer than 3 seconds;
 - Repetitively and in short intervals (wind gusts).
 - Consult weather forecasts;
 - Explain the situation to the client, propose alternatives.

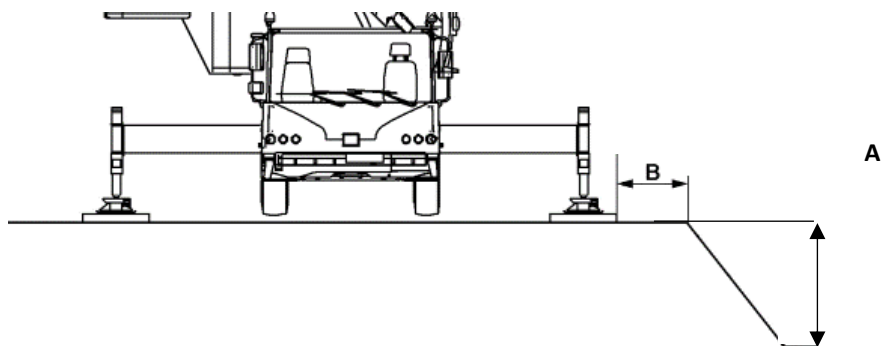
<p>Lightning</p>	<ul style="list-style-type: none"> • Follow the client’s requirements: <ul style="list-style-type: none"> ○ If their requirements are less than those of GUAY, follow GUAY’s. • If it is not specified, GUAY asks you follow the 30/30 rule: <ul style="list-style-type: none"> ○ When possible, use the “Weather Bug” application found on your tablet to anticipate the situation; otherwise: <ul style="list-style-type: none"> ▪ If the time between the moment you see lightning and the moment you hear thunder is less than 30 seconds (this signifies that the lightning is 10 km away), the lightning is close enough to strike you: <ul style="list-style-type: none"> • Halt the work (assembly, disassembly or operation); • Retract and lower the boom, if possible. ▪ Take shelter, either: <ul style="list-style-type: none"> • Get out of the crane and take shelter (avoid trees, high ground, metal objects); • Remain inside the crane and close the windows; • Wait 30 minutes after the last lightning strike before leaving your shelter (half of the deaths occur after the storm has passed).
<p>Ice</p>	<ul style="list-style-type: none"> • Check the structures of considerable height to detect the presence of ice (roof, steel structure, wind turbine, etc.): <ul style="list-style-type: none"> ○ If you ascertain that you are in the trajectory line should the ice fall, halt the work, report the situation to the client and advise on the possible solutions.

4.5.1 Excavation

Excavation	<ul style="list-style-type: none"> ○ It is prohibited to drive or park vehicles or machines less than 3 m from the rim of the banks of an excavation or trench, <u>unless reinforced shoring</u> (ex. a retaining wall made of timber) has been installed (CSTC 3.15.3.5.b): <ul style="list-style-type: none"> ▪ A dig becomes an excavation/trench starting from 4 ft (1.2 m) of depth; ▪ An engineer can authorize <u>in writing</u> other minimum distances than those mentioned here below. ○ For quays and excavations that have been shored up, respect the plan or opinion of the engineer on site for the minimum distance required.
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Summary of the requirements of the CSTC, manufacturers, and Engineering department.

Minimum distance required	DEPTH (a dig, excavation or trench)	Vehicle in motion or parked	Working crane			
		A	B	DISTANCE from the <u>edge of the outrigger pad or crawler track</u> to the edge of the dig		
				Unsloped ground	Sloped ground	
(dig, excavation or trench without a retaining wall)	B	B	Inclined less than 45°	Inclined more than 45° = 10 ft + 25% of A		
1 - 3 ft (0.3 - 1 m)	4 ft (1.2m)	4 ft (1.2m) : ≤ 90t 6,6 ft (2m) : >90t	4 ft (1.2m) : ≤ 90t 6,6 ft (2m) : >90t	4 ft (1.2m) : ≤ 90t 6,6 ft (2m) : >90t		
4 - 8 ft (1.2 - 2.4 m)	10 ft (3 m)	10 ft (3 m)	10 ft (3 m)	12 ft (3.7 m)		
9 - 12 ft (2.7 - 3.7 m)	10 ft (3 m)	10 ft (3 m)	10 ft (3 m)	13 ft (3.9 m)		
13 - 15 ft (3,9 - 4,6 m)	10 ft (3 m)	10 ft (3 m)	10 ft (3 m)	14 ft (4.2 m)		
17 - 20 ft (5 - 6 m)	10 ft (3 m)	10 ft (3 m)	10 ft (3 m)	15 ft (4.6 m)		



4.6 General Safety Rules

These rules must be known and applied by all workers who report for duty on a construction site.

<p>Sandbox</p>	<ul style="list-style-type: none"> • Every worker must: <ul style="list-style-type: none"> ○ Stay within the limits of what their work entails: <ul style="list-style-type: none"> ▪ Do not undertake tasks for which you are not responsible for in order to help or save time. ○ Stay within the limits of what they are capable of doing: <ul style="list-style-type: none"> ▪ Do not undertake tasks for which you do not possess the skills.
<p>Incidents (CSTC 2.4.2.a))</p>	<ul style="list-style-type: none"> • Immediately report all incidents and “close calls” involving people, equipment, or the environment: <ul style="list-style-type: none"> ▪ Complete a Declaration of Event (Appendix 9.6)
<p>Dangerous Conditions (CSTC 2.4.2.a))</p>	<ul style="list-style-type: none"> • Report any dangerous conditions to your supervisor; • Do not tolerate a breach in the implementation of the safety rules; • Pay rigorous attention to the implementation of our Golden Safety Rules.
<p>Emergency measures (CSTC 2.4.2.f) iii.)</p>	<ul style="list-style-type: none"> • 911; • Know the evacuation procedure of the construction site, namely: <ul style="list-style-type: none"> ○ Recognize the alarms; ○ Have the emergency numbers; ○ Know the assembly point; ○ Locate the first aiders and the first aid kits. <p>Get used to locating the emergency equipment in the area where you are working.</p>
<p>Emergency equipment Vehicles</p>	<ul style="list-style-type: none"> • Automobile and motor vehicles are equipped with: <ul style="list-style-type: none"> ○ 1 ABC fire extinguisher (2.5 lb); ○ 1 personal first aid kit. • Motor vehicles (crane, heavy-duty truck) and refueller trucks also have: <ul style="list-style-type: none"> ○ 3 triangular reflectors; ○ 1 spill kit (crane: 20 gal.; other vehicles: 9 gal.).

<p>Proper conduct</p>	<ul style="list-style-type: none"> • It is forbidden to report for duty while under the influence of drugs or alcohol — (refer to the Drugs and Alcohol Policy) (CSTC 2.4.2.a)); • Notify your supervisor if you need to take medication that impairs your abilities (CSTC 2.4.2.a) ; • Heckling (CSTC 2.4.2.d) or behaving in an abusive manner (LSST 51.16) will not be tolerated — (refer to the Harassment Policy); • Before proceeding with a task, make sure you are not in the trajectory line (CSTC 2.4.2.g)); • Walk, do not run; • Wear anti-slip cleats when there is ice; • Never direct compressed air towards yourself to clean your clothes (RSST 325.); • Smoke in the areas designated for that purpose (CSTC 3.23.6.); • Period of intense outdoor heat: <ul style="list-style-type: none"> ○ Drink every 20 minutes; ○ Take breaks in the shade or in an air-conditioned space; ○ Monitor yourself for signs of overexposure to heat: <ul style="list-style-type: none"> ▪ Decreased alertness; ▪ Muscle cramps; ▪ Dizziness; ▪ Nausea.
<p>Hair, jewelry and clothing (CSTC 2.10.2.)</p>	<ul style="list-style-type: none"> • In areas where there is a danger of coming into contact with moving parts: <ul style="list-style-type: none"> ○ Clothes must be fitted and have no loose parts; ○ Necklaces, bracelets or rings are prohibited, with the exception of medical bracelets that must remain fastened on the wrist; ○ Long hair must be tied under the hard hat. • Do not wear a hood that limits your field of vision when you are at work; • Clothing that is not acceptable during work hours: <ul style="list-style-type: none"> ○ Short pants; ○ Tank tops (CSTC 2.4.2.b)); ○ Loose, tattered or worn clothing: <ul style="list-style-type: none"> ▪ Pay particular attention to anything that could interfere with the controls of the crane.
<p>Electronic devices</p>	<ul style="list-style-type: none"> • Do not use your electronic devices during equipment operation. Place the device in the support while driving; • Verify that the radio frequency is unoccupied before starting lifts on the chosen frequency (two-way radios provided by GUAY).

<p>Personal protective equipment (PPE)</p>	<ul style="list-style-type: none"> • To circulate on a construction site, the basic mandatory PPEs are: <ul style="list-style-type: none"> ○ 8” Safety work boots — CSA Z195 (CSTC 2.10.6.); ○ Field welder: metatarsal protection required. ○ Hard hat - CSA 294.1 1-15 (CSTC 2.10.3.); ○ Fluorescent orange high-visibility safety apparel of class 2, in good condition — CSA Z96 (CSTC 10.4.1.); ○ Safety glasses (clear or tinted lenses) - CSA Z94.3 (CSTC 2.10.5.): <ul style="list-style-type: none"> ▪ Except in the operator’s cabin or the driver’s compartment of the truck/crane. • Respirator (CSTC 2.10.8.): <ul style="list-style-type: none"> ○ The training and protective respiratory apparatus will be provided depending on the task/client.
<p>Order and cleanliness</p>	<ul style="list-style-type: none"> • Maintain your equipment clean and orderly at all times (CSTC 3.20.4.); • Ensure that the work areas are free of obstacles and well-cleared (CSTC 3.2.4.).
<p>Transport *Regulation Respecting Safety Standards for Road Vehicles art.192 *Regulation Respecting the Hours of Driving and Rest of Heavy Vehicle Drivers *Transportation of Dangerous Goods Regulations</p>	<ul style="list-style-type: none"> • Comply with GUAY’s Road Safety Management – Heavy Vehicle Driver Policy, in short: <ul style="list-style-type: none"> ○ Defensive driving; ○ Circle check; ○ Hours of driving and rest: <ul style="list-style-type: none"> ▪ Maximum number of hours of driving/day: 13 hrs; ▪ Maximum number of consecutive days: <ul style="list-style-type: none"> • Cycle 1 : 70 hrs/7 d = 36 hrs of rest; • Special travel permit; • Transportation of dangerous substances; • Securement tie-down. • Cheat sheets available for: <ul style="list-style-type: none"> ○ SIP-SSEQ-AM-9-F-V1_Transport-Grues automotrices 3 à 18t; ○ SIP-SSEQ-AM-10-F-V1_Transport de pièces complexes.
<p>Reverse maneuver (CSTC 2.8.5.)</p>	<ul style="list-style-type: none"> • Before reversing: <ul style="list-style-type: none"> ○ Walk around the equipment to locate obstacles. • Construction site (9 workers or less), clients, branch offices: <ul style="list-style-type: none"> ○ Have a signal person: <ul style="list-style-type: none"> ▪ Establish the way of communicating; ▪ Position them in the optimal visibility angle; <ul style="list-style-type: none"> • Stop reversing if you do not see them anymore. • Construction site (10 workers or more): <ul style="list-style-type: none"> ○ The principal contractor should (according to the CSTC): <ul style="list-style-type: none"> ▪ Have a traffic plan that indicates: <ul style="list-style-type: none"> • The trained signal person (construction site and/or traffic control); • The hand signals to use (maneuvers < 10 m); • The bidirectional radios (maneuvers > 10 m).

<p>Work/Rest (CSTC 2.4.2.a))</p>	<ul style="list-style-type: none"> • Follow GUAY’s non-negotiable policy of alternating work and rest: <ul style="list-style-type: none"> ○ Limit of 16 paid hours per day on a construction site; ○ Minimum of 8 hours off between work shifts; ○ Limit of 13 consecutive days (the 14th day must be a day off).
<p>Driving on a construction site (CSTC 2.8.2.)</p>	<ul style="list-style-type: none"> • Obey the traffic signs of the construction site where you are driving: <ul style="list-style-type: none"> ○ Speed limit at our branch offices: 10 km/h.
<p>Environment, spillage/waste (Regulation Respecting Hazardous Materials art. 8.)</p>	<ul style="list-style-type: none"> • Clean up all spillage of hazardous materials and oil promptly and notify your supervisor; • Complete the Declaration of Event; • Dispose according to the instructions received from GUAY. <p>Cranes:</p> <ul style="list-style-type: none"> • Document the verification of the spill kit during the 300 h inspections or after use of the kit. <p>Refueling on a construction site (diesel, gasoline, kerosene):</p> <ul style="list-style-type: none"> • Refueling must be done under constant supervision; • Each branch office has at least one refueling truck comprised of: <ul style="list-style-type: none"> ○ Reservoir; ○ Automatic shut-off fuel nozzle; ○ Integrated pump; ○ Spill kit.
<p>Ladders and stepladders (CSTC 3.5)</p>	<ul style="list-style-type: none"> • Do not jump and avoid climbing. Use the ladders, stepladders and running boards provided for this purpose (CSTC 3.10.1.C): <ul style="list-style-type: none"> ○ Respect the manufacturer’s instructions for proper use; ○ Use industrial ladders/stepladders (type 1A, 300lbs capacity).
<p>Working at height (CSTC 2.9.1)</p>	<ul style="list-style-type: none"> • Use a Personal Fall-Arrest System when collective protection is not available at more than 3 m, and at a lower height if a fall presents a significant danger or according to the client’s request: <ul style="list-style-type: none"> ○ Inspect and adjust your harness – CSA Z259.10, your self-retracting lanyard – CSA Z259.2.2. (or energy absorber and lanyard (maximum length of 2 m) – CSA Z259.11) and your anchor point, as shown in your training (CSTC 2.10.12.).

Machine/equipment safety (CSTC 2.20.13.)	<ul style="list-style-type: none"> • It is prohibited to modify equipment, such as: <ul style="list-style-type: none"> ○ Compressed-air brake system; ○ A crane’s overload system. • Operate equipment only when all the guards and safety systems are in place: <ul style="list-style-type: none"> ○ Immediately report any deficiencies related to machine safety. <p>***Bypassing or making machine safety inoperative is prohibited.</p>
Lockout (CSTC 2.20)	<ul style="list-style-type: none"> • Follow the client’s lockout procedure; <ul style="list-style-type: none"> ○ Affix the individually keyed lock given to you in accordance with the client’s procedure; ○ Validate the lockout.
WHMIS (CSTC 3.16.10.)	<ul style="list-style-type: none"> • Respect the WHMIS 2015 rules, that is to say: <ul style="list-style-type: none"> ○ Know the dangerous products with which you are working; ○ Respect the rules associated to the dangers of these products; ○ Identify secondary containers with a label made by the employer.

4.6.1 Work in a Confined Space

Definitions and obligations (LSST 200.) (CSTC : 1.1.8.m); 1.1.17.1.; 2.4.1.f))	<ul style="list-style-type: none"> • High risk construction site (CSTC 1.1.8.m): <ul style="list-style-type: none"> ○ A site where work is carried out in a confined space, then: <ul style="list-style-type: none"> ▪ Notify the CNESST in writing of the opening/closing of site (CSTC 2.4.1.f)); ▪ Provide a safety program to the CNESST (LSST 200.). • Confined space: a space which is not designed to be occupied by a human being, in particular a tank, silo, vat, caisson, shoring pile, chimney stack or manhole (CSTC 1.1.17.1) : <ul style="list-style-type: none"> ○ <u>A crane’s boom corresponds to this definition.</u>
GUAY’s guidelines	<ul style="list-style-type: none"> • No entry into a confined space may be done while on a construction site; • If an exceptional situation arises, the entry must be: <ul style="list-style-type: none"> ➤ Authorized jointly by the Director of Mechanical Maintenance and Repair and the Vice-President of Operations <u>only if there is no other possible alternative;</u> ➤ Done according to the process dictated by the “Confined Space Entry Permit” used in branch offices; ➤ The client must be notified, and we must align our process with their requirements. <p>*The garage personnel is trained for entry into a confined space; *The feasibility of the rescue procedure must be assessed in the conditions specific to the construction site at that time.</p>

5. Education and Training

5.1 Competence Management (Equipment)

The crane operators' competencies are evaluated and documented according to the types of cranes and related equipment they operate. We operate over 150 types of cranes. Our dispatching system takes into consideration the crane operators' competencies when assigning them to a lift. The branch directors are responsible of keeping the information up to date and striving to train the crane operators according to their aptitudes on as many cranes as possible, in order to provide maximum flexibility to the dispatchers.

5.2 Compliance Management

HSEQ orientation and "refresher" training courses are structured and assigned according to the worker's profile and our clients' requirements through the GUAY Academy and Cognibox. The GUAY Academy is a platform that offers ongoing training courses that are regularly updated to the highest standards of compliance.

Guidelines for First Aid Training:

- Branch offices: minimally 1/50 employees per shift will be trained (plan for vacations);
- Mobile cranes: the mobile crane assembly team supervisors will be trained;
- Tower cranes: 40 % of the team will be trained.

5.3 Mentorship

An apprentice crane operator is supervised during their first five service calls by an experienced crane operator. More time could be allocated depending on the progress observed. Experienced crane operators also offer ongoing training to the entirety of our team (400 crane operators) on the many types of equipment we possess.

5.3.1 Updating Competences

Training sessions specific to various equipment are offered in collaboration with the CCQ (Commission de la construction du Québec). These training sessions are supervised by us and, generally, given by one of our crane operators. These training sessions are offered according to the requests and needs of the branch offices.

5.3.2 Communication and Sharing of Best Practices

Since the workers are spread throughout the territory, we communicate with them through memos to give instructions and recommendations following an incident or a modification to a work method.

6. Program Evaluation and Improvement

6.1 Performance Indicator

Leading Indicator:

- % of closure of corrective measures implemented following adverse events (incident & near miss);
- % of compliance with our Golden Safety Rules observed/addressed on constructions sites;
- % of overall compliance with the points observed/addressed on construction sites.

Lagging Indicator:

- Reportable injury frequency rate (according to OSHA criteria);
- Number of reported events;
- % of construction site observations carried out vs. expected by the branch directors.

6.2 Safety Observation

Workplace Observations are carried out by the branch directors and the HSEQ department on construction sites on a periodic and ad hoc basis. Corrective actions are implemented and evaluated when irregularities are detected (Appendix 9.7)).

6.3 Incident Investigation and Analysis

Incidents must be reported immediately, and a Declaration of Event must be issued within 24 hours. Following this, an investigation can be conducted within 72 hours to identify root causes. An Action Plan is established to correct the deficiencies identified in our management system and the short-term, medium-term, and long-term corrective measures will be studied and then implemented.

*Refer to document “SIP-SSEQ-AM-1-F-V1_Gestion des événements”.

6.4 Right of Refusal

<p>How to apply it?</p>	<ul style="list-style-type: none"> • You ask your director/representative to correct the situation: <ul style="list-style-type: none"> ○ Until it is corrected, you can refuse to perform the work if you believe it exposes you or another person to danger. • Your director/representative must summon another person to represent you, either: <ul style="list-style-type: none"> ○ The Health and Safety representative; ○ The union representative; or ○ Another worker chosen by the person who is refusing to perform the dangerous work. • Together, they will assess the situation.
<p>If the employer and your representative have the same opinion:</p>	<ul style="list-style-type: none"> • That there is a danger: <ul style="list-style-type: none"> ○ Corrective measures will be taken before you return to the work. • That there is no danger: <ul style="list-style-type: none"> ○ You can return to the work or maintain your refusal: <ul style="list-style-type: none"> ▪ In the latter case, the employer can ask another worker to perform the work, but they must inform the worker that a right of refusal has been exercised and the reasons pertaining to it. • That there is a danger in your case: <ul style="list-style-type: none"> ○ Your employer can ask another worker to carry out the task, still informing them beforehand of the reasons which motivate your right of refusal. • Disagree on the existence of a danger or on the measures to be taken: <ul style="list-style-type: none"> ○ The intervention of a CNESST inspector <u>can</u> be requested by either you, your representative, or your employer, and they must come and decide. ○ They will decide whether you must return to the work or allow another worker to do so and, if necessary, prescribe temporary measures or require corrections. ○ Their decision must be implemented immediately and must be justified and confirmed in writing.
<p>You still disagree?</p>	<ul style="list-style-type: none"> • You have 10 days after the written decision to file a request for a revision with the CNESST. If you are dissatisfied with the revision, you can contest it at the Tribunal Administratif du Travail (labour law tribunal). In all cases, contact your union representative.
<p>To remember!</p>	<ul style="list-style-type: none"> • A worker cannot exercise this right if the refusal immediately endangers the health, safety, or physical well-being of another person. • A worker who exercises their right of refusal is deemed to be at work and does not suffer any financial loss. Their employer can require them to remain available at the workplace. • The right of refusal is exercised according to the personal perception of the worker. Their assessment of the danger is not based on a rigorous analysis of the dangerous situation. • A usual condition is not necessarily normal. • The worker can contact their union representative to intervene. • The worker must not receive disciplinary action following the exercise of a right of refusal. Recourses are provided in article 227 of the LSST.

7. Coordination and Communication on a Multi-Employer Construction Site

The branch director is responsible for knowing our clients' safety requirements.

We make sure to maintain our personnel up to date on our clients' orientation trainings. Our crane operators, sales representatives and supervisors participate in construction site meetings when required and ensure that they have all the information regarding the lift and the possible interactions with other teams/equipment surrounding the work area.



8. Conclusion

Incident prevention requires constant and sustained effort from all participants. The only possible guarantee of success for this work tool remains the involvement of managers and workers. We are convinced that with a positive attitude we will successfully achieve our objectives:

1. Prevent any undesirable event;
2. Establish and maintain professional work methods and practices;
3. Develop individual responsibility in regards to safety;
4. Constantly improve our management practices;
5. Integrate environmental issues in the planning process;
6. Encourage quality service based on the pride of our workers in their know-how and their commitment to working professionally.

Claude Chartrand
Director – Health, Safety, Environment and Quality



9. Appendices

9.1 Crane Logbook

N° de la grue	N° de série	Marque et modèle

Carnet de bord Grue mobile

Feuille 1

Vérification journalière pour le mois de _____ Année _____

Malgré les vérifications recommandées ci-dessous, certaines d'entre elles peuvent ne pas être applicables selon le type de grues ou en fonction du genre de travail à effectuer.

Indiquez le résultat de chaque inspection en cochant (✓) si le point vérifié est en bon état.

Noircir la case (■) en cas de déficiences et précisez ces déficiences sur la feuille 2.

Ce carnet doit être rempli durant les heures normales de travail par le travailleur qui a fait la vérification, l'essai, l'inspection ou la réparation.

Nom de l'opérateur (écrire lisiblement)	Nombre d'heures de travail	grue	Jours																																	
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
Généralités																																				
1	Manuel du fabricant																																			
2	Fenêtres, essuie-glace et dégivreur																																			
3	Klaxon, miroirs et avertisseur de recul																																			
4	Indicateur d'angle																																			
5	Avertisseur de palan fermé																																			
6	Indicateur de longueur de flèche																																			
7	Indicateur de rotation du tambour																																			
8	Cadrons, jauges																																			
9	Moteur de la grue, huile, eau et courroies																																			
10	Gardes protecteurs																																			
11	Limiteur haute de flèche																																			
12	Extincteurs																																			
13	Contrôle d'approche pour ligne électrique																																			
14	Graissage et lubrification																																			
15	Verrouillage des cabines																																			
Rotation et treuils																																				
16	Freins, embrayages et commandes																																			
17	Cliquets d'arrêt, rochets et verrous																																			
Flèche et fléchette (inspection visuelle sommaire)																																				
18	Goupilles, clavettes et axes d'articulation																																			
19	Butoir de limite de course (flèche)																																			
20	Huile et boyaux (flèche hydraulique)																																			
Câbles et accessoires (inspection visuelle sommaire)																																				
21	Câble de levage et câble auxiliaire																																			
22	Câble de relevage de flèche																																			
23	Enroulement sur les tambours																																			
24	Tirants de flèche et fléchette																																			
25	Attaches																																			
26	Moufles, crochets et crans de sûreté																																			
27	Poulies, rouleaux et harnais																																			
Transporteur																																				
28	Freins																																			
29	Pneus et taquets de roues																																			
30	Huile et eau (moteur)																																			
31	Phares et clignotants																																			
32	Chaufferette et dégivreur																																			
33	Stabilisateurs																																			



TITLE

SAFETY PROGRAM – CONSTRUCTION SITE

IDENTIFIER

VPO-SSEQ-PROG-1-E-V3

9.2 Malfunction Report



RAPPORT DE DÉFECTUOSITÉS

No. d'unité : _____ Demandeur : _____ Date : _____

Camion : _____ Grue : _____
Heures Odomètre Heures

Description des défauts:

Multiple horizontal lines for text entry.

FQ0906 (07/2018) 10M

DEMANDEUR

DEPARTMENT SSEQ	DOCUMENT OWNER LUCÉ DUGUAY	APPROVED BY J.-F. Houde, V.- P. Operations	CREATED 2022-06-06	REVISION 2024-02-29	REV. V3	PAGE Page 59 sur 72
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9.3 Folding Jib Assembly/Disassembly Checklist



AIDE-MÉMOIRE

Grue # : _____

Date : ____ / ____ / 20____

Nom : _____

Montage de fléchette repliable

1.	Dégager l'aire de travail;	<input checked="" type="checkbox"/>
2.	Étirer le câble de toute la longueur de la fléchette et le faire dépasser de quelques pieds;	<input type="checkbox"/>
3.	Rétracter complètement la flèche;	<input type="checkbox"/>
4.	Installer les 2 "pins" qui relient la fléchette à la tête de la flèche;	<input type="checkbox"/>
5.	Retirer toutes les bannes qui retiennent la fléchette à l'enveloppe de la flèche;	<input type="checkbox"/>
6.	Avant de faire pivoter la fléchette, attacher une corde de guidage;	<input type="checkbox"/>
7.	Installer les 2 autres "pins" qui fixent la fléchette à la tête de la flèche;	<input type="checkbox"/>
8.	Passer le câble sur les poulies de la fléchette (relever la poulie au besoin);	<input type="checkbox"/>
9.	Vérifier que les bannes de garde pour le câble sont en place;	<input type="checkbox"/>
10.	Brancher les connecteurs électriques;	<input type="checkbox"/>
11.	Vérifier que la structure de la fléchette est en bon état;	<input type="checkbox"/>
12.	Faire le tour de la fléchette pour vérifier que rien n'a été oublié.	<input type="checkbox"/>

Démontage de fléchette repliable

1.	Mettre la flèche en position 0° ou moins;	<input type="checkbox"/>
2.	Enlever le câble des poulies et le placer pour ne pas l'endommager;	<input type="checkbox"/>
3.	Débrancher les connecteurs électriques;	<input type="checkbox"/>
4.	Installer une corde de guidage;	<input type="checkbox"/>
5.	Enlever les 2 "pins" du côté opposé au remisage de la fléchette;	<input type="checkbox"/>
6.	Positionner la flèche à la longueur prescrite par le manuel du fabricant;	<input type="checkbox"/>
7.	Pivoter la fléchette dans la position de remisage prescrite par le manuel du fabricant ;	<input type="checkbox"/>
8.	Installer toutes les bannes qui relient la fléchette à l'enveloppe de la flèche;	<input type="checkbox"/>
9.	Enlever les 2 autres "pins" de pivot qui relient la fléchette à la tête de la flèche;	<input type="checkbox"/>
10.	Replacer le câble dans les poulies de la flèche;	<input type="checkbox"/>
11.	Faire le tour de la flèche pour vérifier que rien n'a été oublié.	<input type="checkbox"/>

Dans le doute, se référer au manuel du fabricant.

9.4 Job Safety Analysis

This is an excerpt from the Job Safety Analysis of a 450 ton crane.



ÉVALUATION DES DANGERS – CHANTIER

ANALYSE DE TÂCHE – GRUE À MÂT TÉLESCOPIQUE – ASSEMBLAGE

	ÉTAPE	DANGER	MESURES PRÉVENTIVES
1.	Préparer la sortie de la grue	<ul style="list-style-type: none"> Chute (glisser dans la cour) 	<ul style="list-style-type: none"> Adapter votre pas aux conditions du sol de la cour (mettre les crampons).
2.	Se rendre au chantier	<ul style="list-style-type: none"> Frappé par (accident de la route) Chute d'objet Déversement Danger ergonomique (stress dû au manque d'équipement) 	<ul style="list-style-type: none"> Faire la ronde de sécurité; Vérifier que la trousse de déversement est complète; Commencer la vérification de la grue (Carnet de bord) : <ul style="list-style-type: none"> Vérifier que les assises de bois sont là; Vérifier que les certificats de conformité sont à bord : <ul style="list-style-type: none"> Certificat annuel signé de l'ingénieur; Certificat d'inspection mécanique. Avoir le plan de levage; Conduire de façon préventive; Respecter les heures de repos.
3.	Arrivée au chantier	<ul style="list-style-type: none"> Chute (de la grue) Frappé par (autres véhicules) Contact avec l'électricité 	<ul style="list-style-type: none"> Valider les capacités portantes du sol/routes; Valider l'état du sol (surface inégale, pente), prendre les précautions qui s'imposent; Respecter la signalisation du chantier; Installer le limiteur de portée (au besoin);
4.	Sécuriser la zone de travail	<ul style="list-style-type: none"> Coincé par/entre Chute (objets) 	<ul style="list-style-type: none"> Délimiter une zone de sécurité à l'endroit où la grue est opérationnelle : <ul style="list-style-type: none"> Restreindre l'accès à l'intérieur du rayon de rotation de la grue, à moins que la personne responsable ne l'autorise; Interdire le passage sous la charge; Barricader l'accès si une obstruction se trouve à moins de 60 cm de la grue; Empêcher quiconque de monter, demeurer ou descendre de la grue lorsqu'elle est en mouvement ou en opération.
		<ul style="list-style-type: none"> Frappé par/contre Coincé entre/dans/sur Chute (humain et objet) Dangers ergonomiques : <ul style="list-style-type: none"> Effort exagéré Accès difficile 	<ul style="list-style-type: none"> Vérifier la vitesse des vents avec l'anémomètre; Considérer toujours la ligne de tir lors du détachement des chaînes de la remorque : <ul style="list-style-type: none"> Le camionneur est responsable de relâcher les tendeurs. Faire l'inspection visuelle des élingues; Utiliser l'équipement de manutention approprié; Ne jamais monter sur les sections de flèche ou les contrepoids pour

9.5 Work in Proximity of Electrical Lines

Work near power lines must be done in accordance with the standards written in section 5.2 of the Safety Code for the Construction Industry (French abbreviation: CSTC).

MINIMUM SAFE APPROACH DISTANCE OF ELECTRICAL LINES	
Tension between phases (volts)	Minimum approach distance (meters)
Less than 125 000	3
125 000 to 250 000	5
250 000 to 550 000	8
More than 550 000	12



9.6 Declaration of Event



Déclaration d'événement

Date de la déclaration : / /

ID de la déclaration : 000007

Employé : _____ Fonction : _____
Succursale : _____ Compagnie : _____

Autres employés impliqués

Nom	Succursale	Compagnie	Fonction
-----	------------	-----------	----------

Blessé

Nature de la blessure : _____

Cause de la blessure : _____

Employé de Guay : Employé du client : Autre :

Blessé(s) : _____

Domage matériel

Activité / tâche : _____

Objet causant dommage : _____

Matériel de Guay : Matériel du client : Autre :


Déversement

Activité / tâche au moment de l'incident : _____

Liquide impliqué dans l'incident : _____

Quantité de liquide impliquée : _____

9.7 Observation Checklist

	OBSERVATION - CHANTIER	
Visuel	1	ÉPI portés : casque, bottes, veste haute visibilité, gants.
	2	Protection de chute utilisée.
	3	Zone de rotation de la grue délimitée en tout temps.
	4	GUAY : zone d'opération délimitée (montage/démontage).
	5	CLIENT : zone de levage délimitée.
	6	Excavation : le matelas de la grue est à 3 m minimum.
	7	Manœuvre de recul : le signaleur est présent.
	8	Matelas de répartition de charge, fournis avec la grue, utilisés.
	9	Gréage en bonne condition.
	10	Propreté des équipements - grue, camion, coffres (extérieur/cabine).
	11	Levage de personnes : 1) Plan et certificat disponibles, 2) test de levage fait et plaque-test retirée.
Documentation	12	Manuel du fabricant disponible.
	13	Charte de levage disponibe.
	14	Certification Z-150 annuelle valide.
	15	Certificat d'inspection mécanique signé par le mécanicien-inspecteur (3 mois ou 300hrs).
	16	Homologation et permis de circualtion.
	17	Carnet de bord complété.
	18	Poids de charge validé et signé par le client avant le levage (procédure pré-opérationnelle complétée).
Discussion	19	Plan de levage respecté.
	20	Systèmes de sécurité en fonction : palan fermé et ordinateur de bord.
	21	Limiteur de portée en fonction.
	22	Anémomètre installé.

9.8 Hand Signals for Crane Operators

Figure I.5
UTILISER LE TREUIL PRINCIPAL



Taper du poing sur la TÊTE, puis utiliser les signaux normaux.

Figure I.6
UTILISER LE TREUIL AUXILIAIRE



Taper le COUDE de la main, puis utiliser les signaux normaux.

Figure I.21
BLOQUER TOUT



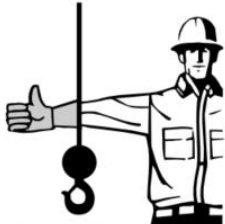
Mains jointées devant soi.

Figure I.22
OUVRIR LA BENNE PRENEUSE



Bras étendu, paume en bas, main ouverte.

Figure I.7
LEVER LA FLÈCHE



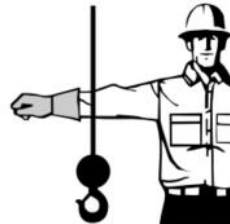
Bras étendu, doigts repliés, pouce pointant vers le haut.

Figure I.8
DESCENDRE LA FLÈCHE



Bras étendu, doigts repliés, pouce pointant vers le bas.

Figure I.23
FERMER LA BENNE PRENEUSE



Bras étendu, main fermée, paume en bas.

Figure I.24
AIMANT DÉCROCHÉ



Le grutier étend les deux bras de chaque côté, paumes en haut.

Figure I.17
TRANSLATION



Bras étendu en avant, main ouverte et légèrement relevée, faire un mouvement de poussée dans le sens de la translation.

Figure I.18
TRANSLATION (les deux chenilles, grues sur chenilles seulement)



Les deux poings devant soi, faire un mouvement de rotation des deux poings l'un autour de l'autre, dans le sens de la translation (en avant ou en arrière).

Figure I.19
TRANSLATION (une chenille, grues sur chenilles seulement)



Lever le poing du côté de la chenille à bloquer. Avec l'autre poing placé devant soi, du côté de la chenille à déplacer, faire un mouvement de rotation vertical dans le sens de la translation souhaitée.

Figure I.20
LEVER LENTEMENT POUR DÉGAGER LE CÂBLE EMMÊLÉ



Mains croisées devant soi au-dessus des épaules, doigts relâchés.

9.9 Sling Capacity

9.9.1 Synthetic Sling

Attention		L'écrasement et le pinçage des élingues synthétiques réduisent la charge maximale significativement.	
ÉLINGUE DE SANGLE SYNTHÉTIQUE SELON L'ASME B30.09-2018			
TYPE	DESCRIPTION	VISUEL	
1	Attache triangulaire et à étranglement	 Type 1	
2	Attache triangulaire aux deux bouts	 Type 2	
3	Boucles plates aux deux bouts	 Type 3	
4	Boucles tordues aux deux bouts	 Type 4	
5	Sans fin	 Type 5	
6	Boucles renversées avec protection	 Type 6	

NON **OUI**

ASME B30.9-5.10.1 (J)

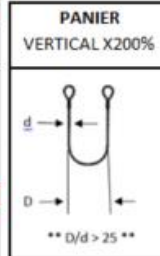
Attention		Les tableaux ci-dessous sont des indicatifs mis à votre disposition à titre de référence. Toujours se référer à la capacité inscrite sur l'étiquette apposée par le fabricant. Ne pas exposer à des températures au-delà de 90°C ou moins de -40°C. Protéger l'élingue contre les arêtes vives.											
CAPACITÉ DES ÉLINGUES DE SANGLE SYNTHÉTIQUES SELON L'ASME B-30.-2010													
Valide pour les élingues de sangle en nylon ou polyester													
LARGEUR	TYPES 1, 2, 3 OU 4 (1 ÉPAISSEUR)						TYPES 1, 2, 3 OU 4 (2 ÉPAISSEURS)						
	VERTICALE		ÉTRANGLEMENT		PANIER VERTICAL		VERTICALE		ÉTRANGLEMENT		PANIER VERTICAL		
Po	mm	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg
1	25	1 600	725	1 200	580	3 200	1 450	3 100	1 400	2 400	1 100	6 200	2 800
2	51	3 100	1 400	2 400	1 120	6 200	2 800	6 200	2 800	4 900	2 200	12 400	5 600
3	76	4 700	2 125	20 800	1 700	17 000	4 250	12 000	4 250	31 200	14 150	25 500	11 550
4	102	6 200	2 800	4 900	2 240	12 400	5 600	11 000	5 000	8 800	4 000	22 000	10 000
5	127	7 800	3 500	6 200	2 800	15 600	7 000	13 700	6 200	10 900	4 950	27 400	12 450
6	152	9 300	4 200	7 400	3 360	18 600	8 400	16 500	7 400	13 200	6 000	33 000	14 950
8	203	11 750	5 350	9 400	4 280	23 500	10 700	22 750	10 320	18 200	8 250	45 500	20 630
10	254	14 700	6 650	11 760	5 320	29 400	13 300	28 400	12 880	22 720	10 300	56 800	25 760
12	305	17 650	8 000	14 120	6 400	35 300	16 000	34 100	15 460	27 280	12 370	68 200	30 930
LARGEUR	TYPE 5 (1 ÉPAISSEUR)						TYPE 5 (2 ÉPAISSEURS)						
	VERTICALE		ÉTRANGLEMENT		PANIER VERTICAL		VERTICALE		ÉTRANGLEMENT		PANIER VERTICAL		
Po	mm	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg
1	25	3 200	1 450	2 400	1 100	6 400	2 900	6 200	2 800	4 900	2 200	12 400	5 600
2	50	6 200	2 800	4 900	2 200	12 400	5 600	12 400	5 600	9 900	4 500	24 800	11 200
3	75	9 400	4 225	7 500	3 400	18 800	8 550	17 600	7 900	14 000	6 350	35 200	15 800
4	100	12 400	5 600	9 900	4 500	24 800	11 250	22 000	10 000	16 500	7 500	44 000	20 000
5	125	15 600	7 025	12 400	5 600	31 200	14 150	27 400	12 300	19 600	8 900	54 800	24 600
6	150	18 600	8 400	14 800	6 700	37 200	16 850	33 000	15 000	22 800	10 350	66 000	30 000
8	200	21 150	9 590	16 920	7 670	42 300	19 180	42 350	19 210	33 880	15 370	84 700	38 410
10	254	26 450	12 000	21 160	9 600	52 900	23 990	52 900	23 990	42 320	19 190	105 800	47 980
12	304	31 750	14 400	25 400	11 520	63 500	28 800	63 500	28 800	50 800	23 040	127 000	57 600

9.9.2 Wire Rope Sling

Attention Les tableaux ci-dessous sont des indicatifs mis à votre disposition à titre de référence. Toujours se référer à la capacité inscrite sur l'étiquette apposée par le fabricant. Réduire la capacité de 25% en étranglement. Ne pas utiliser au-delà de 204°C ou en dessous de -40°C. (IWRC)

CAPACITÉ DES ÉLINGUES DE CÂBLES D'ACIER EIPS, IWRC SELON L'ASME B30.9-2010 (5:1)

DIAMÈTRE NOMINAL DU CÂBLE	ATTACHE VERTICALE		ATTACHE VERTICALE EN ÉTRANGLEMENT		ATTACHE VERTICALE EN PANIER		ATTACHE À DEUX BRINS OU PANIER / ANGLE PAR RAPPORT À L'HORIZONTALE						
	Po	mm	Lb	Kg	Lb	Kg	60°	45°	30°	Lb	Kg	Lb	Kg
1/4	6,3	1 300	600	960	425	2 600	1 200	2 200	1 000	1 800	725	1 300	600
5/16	7,9	2 000	900	1 480	650	4 000	1 800	3 400	1 500	2 800	1 250	2 000	900
3/8	9,5	2 800	1 250	2 200	1 000	5 800	2 600	5 000	2 300	4 000	1 800	2 800	1 250
7/16	11,1	3 800	1 700	2 800	1 250	7 800	3 500	6 800	3 100	5 400	2 450	3 800	1 700
1/2	12,7	5 000	2 250	3 800	1 650	10 200	4 600	8 800	4 000	7 200	3 300	5 000	2 300
9/16	14,3	6 400	2 900	4 800	2 200	12 800	5 800	11 000	5 000	9 000	4 100	6 400	2 900
5/8	15,9	7 800	3 550	5 800	2 550	15 600	7 100	13 600	6 700	11 000	5 000	7 800	3 500
3/4	19	11 200	5 100	8 200	3 700	22 000	10 000	19 400	8 800	15 800	7 200	11 200	5 100
7/8	22,2	15 200	6 900	11 200	5 100	30 000	13 600	26 000	11 800	22 000	10 000	15 200	7 000
1	25,4	19 600	8 900	14 400	6 500	40 000	18 100	34 000	15 400	28 000	12 700	19 600	8 900
1 1/8	28,6	24 000	10 900	18 200	8 300	48 000	21 800	42 000	19 100	34 000	15 400	24 000	10 900
1 1/4	31,7	30 000	13 600	22 000	10 000	60 000	27 200	52 000	23 600	42 000	19 100	30 000	13 600
1 3/8	34,9	36 000	16 300	26 000	11 800	72 000	32 700	62 000	28 100	50 000	22 700	36 000	16 300
1 1/2	38,1	42 000	19 100	32 000	14 500	84 000	38 100	74 000	33 600	60 000	27 200	42 000	19 100
1 3/4	44,4	56 000	25 400	42 000	19 100	114 000	51 700	98 000	43 500	80 000	36 300	56 000	25 400
2	50,8	74 000	33 500	56 000	25 400	146 000	66 200	126 000	57 200	104 000	47 200	74 000	33 600
2 1/4	57,1	88 000	39 900	70 000	31 700	178 000	80 700	154 000	69 800	126 000	57 000	88 000	39 900
2 1/2	63,5	108 000	49 000	84 000	38 100	218 000	98 900	180 700	85 600	154 000	79 800	108 000	49 000
2 3/4	69,8	130 000	59 000	102 000	46 300	260 000	117 900	225 100	102 100	184 000	83 400	130 000	59 000
3	76,2	154 000	69 800	120 000	54 400	306 000	138 800	265 000	120 100	216 000	98 000	154 000	69 800
3 1/2	88,9	204 000	92 500	158 000	71 700	406 000	184 100	351 000	159 400	287 000	130 000	204 000	92 500



RAPPORT D/d	CAP. EN PANIER
25	100%
10	86%
5	75%
2	65%
1	50%

TABLE 9-2.10.1-1

DIAMÈTRE NOMINAL DU CÂBLE	ATTACHE À TROIS BRINS/ANGLE PAR RAPPORT À L'HORIZONTALE						ATTACHE À QUATRE BRIN/ANGLE PAR RAPPORT À L'HORIZONTALE						
	60°	45°	30°	Lb	Kg	Lb	Kg	60°	45°	30°	Lb	Kg	Lb
1/4	6,3	3 400	1 500	2 800	1 300	1 900	880	4 400	2 000	3 600	1 600	2 600	1 200
5/16	7,9	5 200	2 400	4 200	1 900	3 000	1 400	7 000	3 200	5 600	2 500	4 000	1 800
3/8	9,5	7 400	3 400	6 000	2 700	4 400	2 000	10 000	4 500	8 200	3 700	5 800	2 600
7/16	11,1	10 000	4 500	8 200	3 700	5 800	2 600	13 400	6 100	11 000	5 000	7 800	3 500
1/2	12,7	13 200	6 000	10 800	4 900	7 600	3 400	17 600	8 000	14 200	6 400	10 200	4 600
9/16	14,3	16 600	7 500	13 600	6 200	9 600	4 400	22 600	10 000	18 000	8 200	12 800	5 800
5/8	15,9	20 000	9 100	16 600	7 500	11 800	5 400	28 000	12 700	22 000	10 000	15 600	7 100
3/4	19	30 000	13 600	24 000	10 900	16 800	7 600	38 000	17 200	32 000	14 500	22 000	10 000
7/8	22,2	40 000	18 100	32 000	14 600	22 000	10 000	52 000	23 600	42 000	19 000	30 000	13 600
1	25,4	52 000	23 600	42 000	19 000	30 000	13 600	68 000	30 800	56 000	25 400	40 000	18 100
1 1/8	28,6	62 000	28 100	52 000	23 600	36 000	16 300	84 000	38 100	68 000	30 800	48 000	21 800
1 1/4	31,7	76 000	34 500	62 000	28 100	44 000	20 000	102 000	46 300	84 000	38 100	60 000	27 200
1 3/8	34,9	92 000	41 700	76 000	34 500	54 000	24 500	124 000	56 200	100 000	45 400	72 000	32 700
1 1/2	38,1	110 000	49 900	90 000	40 800	64 000	29 000	146 000	66 200	120 000	54 400	84 000	38 100
1 3/4	44,4	148 000	67 100	120 000	54 400	84 000	38 100	196 000	88 900	160 000	72 600	114 000	51 700
2	50,8	190 000	86 200	156 000	70 700	110 000	49 900	254 000	115 200	208 000	94 300	146 000	66 200

9.9.3 Alloy Steel Chain Sling


Attention

Les tableaux ci-dessous sont des indicatifs mis à votre disposition à titre de référence. Toujours se référer à la capacité inscrite sur l'étiquette apposée par le fabricant. Réduire la capacité à partir de 204°C, ne pas utiliser au-delà de 538°C ou en dessous de -40°C.

CAPACITÉ DES ÉLINGUES DE CHÂÎNES EN ACIER ALLIÉ SELON L'ASME B30.9-2010

GRADE 8 (80) Tous les angles sont par rapport à l'horizontale.

DIAMÈTRE NOMINAL DE LA CHÂÎNE	ATTACHE VERTICALE	ATTACHE À DEUX BRINS						ATTACHE À TROIS OU QUATRE BRINS							
		60°		45°		30°		60°		45°		30°			
Po	mm	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg
7/32	5,5	2 100	950	3 600	1 650	3 000	1 350	2 100	950	5 500	2 450	4 400	2 000	3 200	1 450
9/32	7	3 500	1 590	6 100	2 700	4 900	2 200	3 500	1 600	9 100	4 100	7 400	3 300	5 200	2 400
5/16	8	4 500	2 040	7 800	3 500	6 400	2 900	4 500	2 000	11 700	5 300	9 500	4 300	6 800	3 100
3/8	10	7 100	3 220	12 300	5 500	10 000	4 500	7 100	3 200	18 400	8 300	15 100	6 800	10 600	4 800
1/2	13	12 000	5 440	20 800	9 400	17 000	7 600	12 000	5 400	31 200	14 100	25 500	11 500	18 000	8 100
5/8	16	18 100	8 210	31 300	14 200	25 600	11 600	18 100	8 200	47 000	21 300	38 400	17 400	27 100	12 300
3/4	20	28 300	12 830	49 000	22 300	40 000	18 200	28 300	12 800	73 500	33 300	60 000	27 200	42 400	19 300
7/8	22	34 200	15 510	59 200	26 900	48 400	22 000	34 200	15 500	88 900	40 400	72 500	32 900	51 300	23 250
1	26	47 700	21 630	82 600	37 500	67 400	30 500	47 700	21 600	123 900	56 200	101 200	45 900	71 500	32 400
1 1/4	32	72 300	32 790	125 200	56 800	102 200	46 400	72 300	32 800	187 800	85 200	153 400	69 600	108 400	49 200

GRADE 10 (100) Tous les angles sont par rapport à l'horizontale.

DIAMÈTRE NOMINAL DE LA CHÂÎNE	ATTACHE VERTICALE	ATTACHE À DEUX BRINS						ATTACHE À TROIS OU QUATRE BRINS							
		60°		45°		30°		60°		45°		30°			
Po	mm	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg	lb	Kg
7/32	5,5	2 700	1 220	4 700	2 100	3 800	1 700	2 700	1 200	7 000	3 200	5 700	2 600	4 000	1 800
9/32	7	4 300	1 950	7 400	3 400	6 100	2 750	4 300	1 950	11 200	5 050	9 100	4 150	6 400	2 950
5/16	8	5 700	2 600	9 900	4 500	8 100	3 700	5 700	2 600	14 800	6 700	12 100	5 500	8 500	3 700
3/8	10	8 800	4 000	15 200	6 950	12 400	5 650	8 800	4 000	22 900	10 400	18 700	8 500	13 200	6 000
1/2	13	15 000	6 800	26 000	11 800	21 200	9 600	15 000	6 800	39 000	17 650	31 800	14 450	22 500	10 200
5/8	16	22 600	10 300	39 100	17 750	32 000	14 500	22 600	10 300	58 700	26 650	47 900	21 750	33 900	15 400
3/4	20	35 300	16 000	61 100	27 700	49 900	22 650	35 300	16 000	91 700	41 550	74 900	33 950	53 000	24 000
7/8	22	42 700	19 400	74 000	33 500	60 400	27 350	42 700	19 400	110 900	50 250	90 600	41 050	64 000	29 050

9.9.4 Steel Chain Sling in a Choker Hitch

Attention		Les tableaux ci-dessous sont des indicatifs mis à votre disposition à titre de référence. Toujours se référer à la capacité inscrite sur l'étiquette apposée par le fabricant. Réduire la capacité à partir de 204°C, ne pas utiliser au-delà de 538°C ou en dessous de -40°C.													
CAPACITÉ DES ÉLINGUES DE CHÂÎNES EN ACIER ALLIÉ SELON L'ASME B30.9-2010															
GRADE 8 (80) EN ÉTRANGLEMENT et tous les angles sont par rapport à l'horizontale.															
DIAMÈTRE NOMINAL DE LA CHÂÎNE		ATTACHE VERTICALE EN ÉTRANGLEMENT 90°		ATTACHE À DEUX BRINS EN ÉTRANGLEMENT						ATTACHE À TROIS OU QUATRE BRINS EN ÉTRANGLEMENT					
PO	mm	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg
7/32	5,5	1 700	770	2 900	1 320	2 400	1 090	1 700	770	4 400	2 000	3 500	1 590	2 600	1 180
9/32	7	2 800	1 270	5 000	2 270	3 900	1 770	2 800	1 270	7 300	3 310	5 900	2 680	4 200	1 900
5/16	8	3 600	1 630	6 200	2 810	5 100	2 310	3 600	1 630	9 300	4 220	7 600	3 450	5 400	2 450
3/8	10	5 700	2 590	9 800	4 440	8 000	3 630	5 700	2 590	14 700	6 670	12 100	5 490	8 500	3 850
1/2	13	9 600	4 350	16 600	7 530	13 600	6 170	9 600	4 350	25 000	11 340	20 400	9 250	14 400	6 530
5/8	16	14 500	6 580	25 000	11 340	20 500	9 300	14 500	6 580	37 600	17 050	30 700	13 920	21 700	9 840
3/4	20	22 600	10 250	39 200	17 780	32 000	14 510	22 600	10 250	58 800	26 670	48 000	21 770	33 900	15 370
7/8	22	27 400	12 430	47 400	21 500	38 700	17 550	27 400	12 430	71 100	32 240	58 000	26 300	41 000	18 590
1	26	38 200	17 320	66 100	29 980	53 900	24 440	38 200	17 320	99 100	44 940	81 000	36 730	57 200	25 940
1 1/4	32	57 800	26 210	100 200	45 440	81 800	37 100	57 800	26 210	150 200	68 120	122 700	55 650	86 700	39 320

GRADE 10 (100) EN ÉTRANGLEMENT et tous les angles sont par rapport à l'horizontale.															
DIAMÈTRE NOMINAL DE LA CHÂÎNE		ATTACHE VERTICALE EN ÉTRANGLEMENT 90°		ATTACHE À DEUX BRINS EN ÉTRANGLEMENT						ATTACHE À TROIS OU QUATRE BRINS EN ÉTRANGLEMENT					
PO	mm	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg
7/32	5,5	2 100	950	3 600	1 630	3 000	1 360	2 100	950	5 500	2 490	4 400	2 000	3 200	1 450
9/32	7	3 500	1 590	6 100	2 770	4 900	2 220	3 500	1 590	9 100	4 130	7 400	3 360	5 200	2 360
5/16	8	4 500	2 040	7 800	3 540	6 400	2 900	4 500	2 040	11 700	5 310	9 500	4 310	6 800	3 080
3/8	10	7 100	3 220	12 300	5 580	10 000	4 540	7 100	3 220	18 400	8 340	15 100	6 850	10 600	4 810
1/2	13	12 000	5 440	20 800	9 430	17 000	7 710	12 000	5 440	31 200	14 150	25 500	11 560	18 000	8 160
5/8	16	18 100	8 210	31 300	14 200	25 600	11 610	18 100	8 210	47 000	21 320	38 400	17 410	27 100	12 290
3/4	20	28 300	12 830	49 000	22 220	40 000	18 140	28 300	12 830	73 500	33 330	60 000	27 210	42 400	19 230
7/8	22	34 200	15 510	59 200	26 850	48 400	21 950	34 200	15 510	88 900	40 320	72 500	32 880	51 300	23 270

9.9.5 Polyester Round Sling

Code de couleur (enveloppe extérieure)		Largeur approx, sous charge		Verticale		Étranglement		Panier vertical		Attache en panier, angle 45° par rapport à l'horizontale		Diamètre minimum d'un axe
PO	MM	LB	KG	LB	KG	LB	KG	LB	KG	LB	KG	POUCE
Mauve	2	50	2 600	1 200	2 100	1 000	5 200	2 400	3 700	1 700	7/16	
Vert	2	50	5 300	2 400	4 200	1 900	10 600	4 800	7 500	3 400	5/8	
Jaune	2	50	8 400	3 800	6 700	3 000	16 800	7 600	11 900	5 400	3/4	
Tan	2	50	10 600	4 800	8 500	3 800	21 200	9 600	15 000	6 800	7/8	
Rouge	3	75	13 200	6 000	10 600	4 800	26 400	12 000	18 700	8 500	1	
Blanc	3	75	16 800	7 600	13 400	6 000	33 600	15 200	23 800	10 700	1 1/8	
Bleu	3	75	21 200	9 600	17 000	7 600	42 400	19 200	30 000	13 600	1 3/16	
Orange	4	100	25 000	11 400	20 000	9 100	50 000	22 800	35 400	16 100	1 1/4	
Gris	4	100	31 000	14 100	24 800	11 300	62 000	28 200	43 800	19 900	1 1/2	
Orange	5	125	40 000	18 200	32 000	14 500	80 000	36 400	56 600	25 700	1 5/8	
Brun	6	150	53 000	24 100	42 400	19 300	106 000	48 200	74 900	34 100	2	
Olive	7	175	66 000	30 000	52 800	24 000	132 000	60 000	93 000	42 400	2 1/8	
Noir	8	200	90 000	40 900	72 000	32 700	180 000	81 800	127 300	57 800	2 1/2	
	8	200	100 000	45 400	80 000	36 300	200 000	90 700	141 400	64 100	2 3/4	
	8	200	150 000	68 000	120 000	54 400	300 000	136 100	212 100	96 200	3 1/4	
	10	254	175 000	79 400	140 000	63 500	350 000	158 700	247 500	112 200	3 1/2	
	10	254	200 000	90 700	160 000	72 600	400 000	181 400	282 800	128 300	3 3/4	
	12	304	225 000	102 000	180 000	81 600	450 000	204 100	318 200	144 300	3 3/4	
	12	304	300 000	136 100	240 000	108 800	600 000	272 100	424 300	192 400	4 1/4	
	12	304	550 000	249 400	440 000	199 500	1 100 000	498 900	777 800	352 700	5 1/4	

DIMENSIONS APPROPRIÉES (ÉLINGUE RONDE + MANILLE)					
Les diamètres aux tableaux incluent également les accessoires tel que les groujons, tourillons, vourons et tout axe					
	VERTICAL OU ÉTRANGLEMENT			DEUX BRINS OU PANIER	
	Capacité Élingue Ronde	Dimension Manille ou accessoire		Capacité Élingue Ronde	Dimension Manille ou accessoire
	LB	Diamètre min. (pouces)	Largeur min. (pouces)	LB	Diamètre min. (pouces) / Largeur min. (pouces)
	2 600	7/16	1	5 200	9/16 / 1 3/8
	5 300	5/8	1 3/8	10 600	7/8 / 1 7/8
	8 400	3/4	1 3/4	16 800	1 1/16 / 2 3/8
	10 600	7/8	1 7/8	21 200	1 1/4 / 2 1/2
	13 200	1	2	26 400	1 3/8 / 2 7/8
	16 800	1 1/8	2 1/8	33 600	1 5/8 / 3
	21 200	1 3/16	2 5/8	42 400	1 5/8 / 3 3/4
	25 000	1 1/4	2 7/8	50 000	1 7/8 / 4
	31 000	1 1/2	3 1/4	62 000	2 / 4 1/2
	40 000	1 5/8	3 5/8	80 000	2 3/8 / 5
	53 000	2	4	106 000	2 3/4 / 5 5/8
	66 000	2 1/8	4 5/8	132 000	3 / 6 1/2
	90 000	2 1/2	5 1/4	180 000	3 1/2 / 7 3/8

WSTDA-RS-1, TABLE 4-6

WSTDA-RS-1, TABLE 4-7

9.10 Disciplinary Action Protocol

TYPE OF OFFENCE	OFFENCE					
	1 st	2 nd	3 rd	4 th	5 th	6 th
<p>VERY SEVERE</p> <p>Not respecting one of the five Golden Safety Rules listed below (section 1.3):</p> <ul style="list-style-type: none"> I. Bypassing a security system is prohibited. II. Respect the power line approach limits, program the range limiting device when required. III. Respect the load capacity of the equipment. IV. Use fall protection systems. V. Stay a minimum of 3 meters away from any excavation. 	Suspension 3 days	Suspension 5 days	Dismissal			
<p>SEVERE</p> <p>Not respecting one of the three Golden Safety Rules listed below (section 1.3):</p> <ul style="list-style-type: none"> VI. Comply with the procedures provided in the manufacturer's manuals. VII. Have a signal person present during reverse maneuvers. VIII. Report any incident, near miss, or spill. 	Written notice	Suspension 1 day	Suspension 3 days	Suspension 5 days	Dismissal	
<p>SERIOUS</p> <p>Violation of a basic rule cited in sections 4.2 to 4.5 of the safety program.</p>	Verbal warning or other measure	Written notice	Suspension 1 day	Suspension 3 days	Suspension 5 days	Dismissal

9.10.1 Disciplinary Notice



AVIS DISCIPLINAIRE

Compagnie :	<input type="checkbox"/> GUAY	Avis n°	<input type="text"/>
	<input type="checkbox"/> Machineries Provinciales inc.	Nom de l'employé :	<input type="text"/>
Succursale :	<input type="text"/>	Numéro d'employé :	<input type="text"/>
		Titre du poste :	<input type="text"/>

Identification du chantier (s'il y a lieu)

Date de l'évènement ou du comportement

Brève description de l'évènement ou du comportement

Mesures correctives

Nous avons décidé de vous imposer la mesure disciplinaire suivante

- | | |
|--|---|
| <input type="checkbox"/> Avis verbal déposé au dossier | <input type="checkbox"/> Avis écrit déposé au dossier |
| <input type="checkbox"/> Suspension de <input type="text"/> jours sans rémunération* | <input type="checkbox"/> Congédiement |

Cette mesure disciplinaire est en vigueur

Le

En date d'un appel de service à votre rang de présence

Cet avertissement fait partie intégrante de votre dossier et pourrait entraîner une mesure disciplinaire plus sévère pouvant même aller jusqu'au congédiement s'il y avait répétition de l'évènement ou du comportement ou survenance d'un nouvel évènement ou comportement.

Nom du superviseur

Signature du superviseur

Date

J'accuse réception de cet avis disciplinaire

Signature de l'employé

Date

*pour les employés CCQ, les jours de suspension sont uniquement applicables à des journées pour lesquelles vous auriez été assigné à un appel de service.