



**Berry Bros. General Contractors, Inc.  
Corporate Policy Procedure**

Section # 67

Issue Date: 11-18-2014

**(HSE) Health, Safety & Environmental  
Policies and Procedures Manual**

Doc # SWP - 67

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**RIGGING / LIFTING PROGRAM**


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**SUBPART A - PURPOSE**

The purpose of this policy is to address recommended practices for all Lifting and Rigging work performed by BBGCI. It is the responsibility of BBGCI to adequately train any personnel that will be working directly with lifting/rigging operations and/or material handling. Only certified and trained personnel in rigging shall be allowed to attach or detach lifting equipment to loads or lifting loads. This includes qualified crane operators, equipment operators, riggers, and inspectors.

**SUBPART B - OBJECTIVE**

The objective of this policy is to ensure all personnel performing lifting/rigging operations know and understand his/her job duties and the safe work practices BBGCI requires. (We can add on, I just think an objective subpart would be better than policy)

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## **SUBPART C – QUALIFIED RIGGER**

The basic scope of the training criteria is to familiarize the employee with the basics of rigging applications associated with manual material handling and with lifting/hoisting operations. All Approved Rigging training for qualified riggers includes classroom study, hands-on exercises and a competency exam. The hands-on training includes topics such as proper inspection, use, selection, and maintenance of loose gear (slings, hooks, shackles, etc.). All BBGCI Employees to become riggers, or assist in rigging duties must attend and pass all parts of a Rigging course that has been approved through Corporate HSE department.

Training shall incorporate familiarization with rigging, hardware, slings, and safety issues associated with rigging, lifting loads and lift planning. Training shall include classroom, hands-on training and exams. Hands-on shall include proper inspection, use, selection of and maintenance of loose gears (slings, shackles, hooks, etc.)

## **SUBPART D –LIFT CATEGORIZATION**

### **Routine Lifts:**

1. Within the normal operating parameters of the crane
2. The load does not have to be lifted over sensitive areas
3. There are suitable current environmental conditions
4. A familiar and competent Operator is making the lift
5. The load has a known and evaluated weight shape, and center of gravity
6. Standard rigging arrangements

Routine Repetitive lifting operations using the same equipment

1. Single function or series of functions repeated manually or automatically
2. Same equipment
3. Same Operators

Required Documentation/Controls:

1. 12 Questions for a Safe Lift
2. JSEA
3. Equipment Inspection
  - a. Daily equipment inspections
  - b. Annual certifications
4. Proper lifting equipment certifications



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**Non Routine Lifts: (including but not limited to)**


1. Lifts over or within 6 feet horizontally of an active or energized hydrocarbon-containing process equipment
2. Lifts that expose synthetic sling to dynamic, shock, or snatch conditions
3. Lifts with awkward shapes, unbalanced weight, unknown/difficult to estimate weight, center of gravity, or a chance of being stuck
4. Lifts into or out of confined spaces or shafts
5. Lifts requiring bypass of safety devices

**Required Documentation/Controls**

1. Risk Assessment / Hazard Task Control Form (HTCF)
2. Lift Plan (Specific)
3. JSEA
4. 12 Questions for a Safe Lift
5. Equipment Inspection
  - a. Daily equipment inspections
  - b. Annual certifications
6. Proper lifting equipment certifications
7. Work Permit
8. Supervision Walk Through (SWT)

**Complex/Critical:**

1. Continuation of a lifting operation with different people; for example shift changeover
2. Lifting of Personnel
3. Over or in sensitive areas – active or energized hydrocarbon-containing equipment, near overhead electrical power lines
4. Tandem lift with two cranes
5. Transferring the load from one lifting appliance to another
6. In environmental conditions likely to affect equipment performance
7. Operator under training
8. Load with unknown/difficult to estimate weight and/or center of gravity
9. Load is special and/or expensive whose loss would have a serious impact on production operations
10. Mobile crane on untested/uneven ground, on moving location, on offshore installation, vessel, barge or mobile
11. Non-standard rigging arrangements

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12. Load lowered into or lifted from a confined space

**Required Documentation/Controls**

- 9. Risk Assessment / HTCF
- 10. Critical Lift Plan
- 11. JSEA
- 12. 12 Questions for a Safe Lift
- 13. Equipment Inspection
  - a. Daily equipment inspections
  - b. Annual certifications
- 14. Proper lifting equipment certifications
- 15. Work Permit
- 16. Supervision Walk Through (SWT)
- 17. Subject Matter Expert (SME) onsite

**NOTE:** All categorized lifts will be determined by the PICL, or Supervisor on site, for more information refer to SWP 67 – TA1 – Lift Categorization and Work Authorization Table (Appendix II)


**SUBPART F - RESPONSIBILITIES**

**Designated Signal Person (DSP)**

- Participate in Lift Planning/JSA/risk assessment of lifting operations
- Maintain communication with crane operator (radio/visual)
- Provide signals for the lifting, moving, and setting down of load when needed
- Wear a high-visibility mesh/reflective vest or hard hat cover that will clearly distinguish him/her from anyone else on the worksite

**Person in Charge of the Lift (PICL)**

- Executes lifts in accordance with the requirements in this document
- Makes himself/herself known to all persons directly involved in the lift and those involved in concurrent operations that could interact with the lift
- Coordinate and control all aspects of the lifting operations, including:
  - Ensuring that every person(s) involved is competent to perform his or her task

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- Ensuring that every person involved is aware of the task, the procedures to be followed, and his or her responsibilities
- Ensure that all lifting equipment is within inspection intervals and certifications are valid
- This person may also be the Qualified Operator on site


### **Qualified Operator**

- Participate in all Medical testing requirements, as required
- Conduct proper pre-use inspections and tests
- Ensure all lift planning has been completed by the Person in Charge of the Lift (PICL)
- Perform Daily/Pre-Use documented inspections
- Perform operational and load testing
- Perform first-line maintenance
- Participate in Lift Planning/JSA/risk assessment of lifting operations
- Address any safety concerns before or during any lifting operations (including weather conditions)
- Adhere to any tags placed on the lifting equipment
- Take the crane out of or restrict service if adjustments/repairs are necessary.
- Inform the Job Coordinator and request remedial action when a crane is taken out of service
- Refuse to handle loads or continue operations as safety dictates
- Ensure loads are not hoisted over personnel
- For critical lifts, ensure the load does not exceed 75% of the rated capacity
- For complex lifts involving personnel the load shall not exceed 50% of the rated capacity
- Ensure weight indicators are available to validate the weight of the load

### **Before operations requiring radio communications:**

- Ensure radio communication is established
- Ensure the DSP understands and agrees to all radio signals
- Preview all visible/blind lifts with the DSP and all riggers associated with the lift
- Be at the crane controls at all times while a load is suspended
- Ensure a tag line is used, if deemed necessary

### **During operations that require radio communications:**

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- Never move a load if the signal is not understood
- Limit a radio signal to a single function (e.g. booming up vs. booming up and lifting up)
- Use a dedicated radio frequency during all lifting operations
- Signals must be discernable or audible at all times
- Stop lifting operations immediately if communications are lost or anyone calls for a work stoppage. Work must not recommence until formal communication is re-established

### Qualified Rigger

- Participate in JSA/risk assessment of lifting operations
- Assess the load to be lifted, and discuss with PICL the best route to execute the lift
- Select proper rigging to suit the load
- Properly rig the load in the most secure way possible
- Inspect the rigging equipment and the tag lines being used to verify that it is satisfactory to use (including certification)
- Attach the load to the crane or mobile lifting equipment
- Act as load handler by using tag lines when necessary
- Ensure correct selection and conduct pre-use inspection of rigging equipment
- Maintain knowledge of standard hand signals
- Act as DSP, if necessary
- Assume the responsibility of the safety of all personnel around the operating area, including the rigger's personal safety
- Aware of the surrounding areas and the potential for hazards to effect the load
- Ensure that all personnel do not stand between the load and any other object that may create a pinch point zone.
- Always maintain eye contact and or communications with the operator
- Stop any lift operation that is deemed as unsafe!

### Supervisor

- Identify a PICL for each lifting operation
- Appoint an SME (Subject Matter Expert) for each Non-Routine Complex/Critical lift, this person may also be the PICL for that lift; any

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subcontracted heavy lifting being performed the sub-contractor will be responsible for providing an SME as well as a PICL

- Ensure local requirements for conducting lifting and hoisting operations during extreme environmental conditions are in place
- Verify the lift plan is in place for non-routine lifts and authorized
- For non-routine lifts ensure the lift is authorized in writing. (WCC/PTW) Ensuring that hoisting equipment is inspected daily and rigging equipment prior to each use.
- Ensuring that Operators are trained in safe work standards including the use of fire extinguishers.

For personnel lifts:


- Review alternate methods of lifting personnel
- Ensure that each proposed personnel lift is the least hazardous, most practical method for performing the work
- Ensure that only QO/QPs operate personnel lifting devices
- Ensure that all personnel lifting devices are within inspection and testing intervals

### **Safety Department**

- Verifying / confirming operators are certified or licensed
- Periodically verifying monthly test and inspection reports
- Interpreting crane and hoist safety rules and standards

### **Maintenance/Operations Department**

- Overseeing annual maintenance and inspection of all Berry Bros. cranes and hoists that are not covered by a program with maintenance responsibility.
- Maintaining written records of inspections and tests, and providing copies of all inspections and test results to facility managers and building coordinators who have cranes and hoists on file.
- Inspecting and load testing cranes and hoists following modification or extensive repairs (e.g., a replaced cable or hook, or structural modification.)
- Scheduling a non-destructive test and inspection for crane and hoist hooks that are suspected of having been overloaded. The evaluation, inspection, and testing may include, but are not limited to visual, dye penetrant, and magnetic

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particle techniques referenced in ASME B30.10 (Hooks, Inspection and Testing.)

- Maintaining all manuals for cranes and hoists in a central file for reference.
- Providing that a substantial and durable chart with clearly legible letters & figures shall be provided with each crane and securely fixed to the crane cab in a location easily visible to the operator while seated at this control station.

## **SUBPART G –LIFT PLANNING**


Lift planning that identifies the hazard and mitigates the risk shall be done for all lifting operations; per operator shift or as operators change. Only lifts that have been identified and discussed in the planning session will be performed during the operation session. All lifts other than routine lifts will require specific lift planning according to SWP 67 – TA1 – Lift Categorization and Work Authorization Table. Multiple non-routine lifts of similar nature may be incorporated in the same lift plan.

The Supervisor for each specific sight will designate a Person In Charge Of the Lift (PICL) for all lifting and hoisting operations. There may be multiple lifts going on, on any given site, in this event there may be multiple PICL's on site where each PICL is in charge of his/her particular lift at hand.

When planning and executing lifting operations, the PICL must do the following steps to ensure the lift is being carried out properly:

1. Use the SWP 67 – TA 1 – Lift Categorization and Work Authorization Table (Attached) to classify each lifting accordingly.
2. Ensure that the lift area(s) is:
  - a. Controlled to ensure individuals are safeguarded from entering the path of the load
  - b. Adequately sized for the load's size and weight
  - c. Free of any potential hazards that may affect the lift
3. Verify that the answers to SWP 67 – 12 Questions for a Safe Lift (Attached) are addressed and verified in the Toolbox Talk/Pre-Lift Meeting
  - a. Ensure all applicable employees are aware of each step of the lift and are confident in their roles for the lift.
4. Ensure that all applicable lift planning requirements in this document are met.




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5. Check that all lifting equipment being used for the current lift has been entered into the Sling/Lift Registry and is approved for the lift.
6. Ensure that the Operator has established communications with the Rigger and/or Designated Signal Person.
7. **Fill out the appropriate Lifts Plans for all lifts. Refer to Subpart G**

## **SUBPART H - PRE-JOB/OPERATION MEETINGS**

Prior to beginning any activities, a pre-job meeting is to be held with all personnel involved in the operation. The contents of this meeting shall include the following points:

1. Review 12 Questions for a safe lift, all applicable JSEAs, Lift Plans, and Emergency plans
2. Physical information on the materials that will be transported (including any corresponding MSDS information if applicable).
3. Responsibilities of each team member.
4. Method(s) of handling to be used during the operation.
5. Method(s) of securing the materials.
6. Personal Protective Equipment to be used by all personnel.
7. Select the proper rigging equipment to be used.
8. Designation of a signaller and the team agrees upon a communication method.
9. Placement of the materials (may involve a captain if to be loaded on a vessel).
10. Ensure that only qualified riggers and essential personnel are allowed in the work area during lifting operations.
11. Verify load weights by load markings and manifests.
12. Ensure that safe working loads of equipment and tackle are not exceeded.
13. Inspect all hardware, equipment, tackle, and slings before use and to destroy or render any defective components unusable.
14. Verify that all slings have proper certification tags. Do not use any slings, chains, etc. without proper certification tags.
15. Inspect all loads or cargo containers, including permanent slings or tackle. Evaluate load stability and potential for spill or release of fluids.

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## **SUBPART I - CAPACITIES**

The maximum load specification for any hoist/equipment must be noted on the hoist, rigging equipment, and lifting equipment. Cranes, Hoists, and Equipment Operators must know the load capacities of the equipment, the weight of the load, and must not exceed the capacity of any hoist. Capacity charts and signs must be posted in a prominent place near the hoist so the operator can see them clearly.

Load Indicating Devices shall be periodically inspected as recommended by the manufacturer's in-service inspection plan to verify the integrity of the product over its life. Minimum requirements shall be a detailed annual visual inspection. LIDs shall be replaced based on fatigue calculations supplied by the vendor.

Cranes or any other pieces of equipment should never be overloaded beyond their rated capacity. Any crane, hoist or equipment that has been overloaded shall be removed from service, locked out and can only be returned to work once it has been inspected, repaired, load tested, and approved for use by a qualified person.


## **SUBPART J – RIGGING EQUIPMENT AND HARWARE**

If necessary and if safe to do so, tag lines must be used to control loads. Before the hook is moved, personnel using tag lines must be sure the lines are free with no knots. Tag lines must not be wrapped around the hand or wrist. The operator, signal person, and load handlers are responsible for ensuring that the load is never over any person.

Prior to each lift the qualified rigger must perform visual inspections looking for items such as, but not limited to: defects such as damage and corrosion, proper configuration (the lifting assembly and associated hardware has been load tested) and ensure the sling has a current certification.

All rigging equipment shall be inspected annually; defective equipment is to be removed from service and destroyed to prevent inadvertent reuse. All documented inspections must be performed by the QP (Qualified Person) on site. The load capacity limits shall be stamped or affixed to all rigging components.

Note:

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- Any sling without a certification tag must be removed from service and recorded in the lifting register. The sling must be re-certified prior to use.
- Slings found in an unsafe operating condition must be discarded according to discard procedure.


**Wire Rope Slings** – must be manufactured in accordance to ASME B 30.9

- **Operational Requirements**

- Any Wire rope sling found in an unsafe operating condition must be properly discarded. When not in use, slings shall be kept on a rack in an area where they will not be exposed to:
  - Water
  - Extreme temperatures
  - Corrosive fumes, liquid, or sprays.

- **Inspection Protocol**

- Pre-use
  - Check for defects such as damage and corrosion.
  - Check for proper configuration (the lifting assembly and associated hardware, as load tested).
  - Ensure the sling has current certification.
  - Any sling without a certification tag, or non-legible tag, must be removed from service and recorded in the lifting register. The sling must be re-certified prior to use.
  - Slings found in an unsafe operating condition must be discarded according to discard procedure. Unsafe operation conditions include but not limited to:
    - Kinking, crushing, bird caging, or other distortions.
    - Evidence of heat damage.
    - Cracks, deformation, or worn end attachments.
    - Six randomly broken wires in a single rope lay.
    - Three broken wires in one strand of rope.
- Periodic Documented Inspection
  - File sling annual inspection records with certification papers.
  - Add tag or color coding to indicate the inspection date.
  - Verify pre-slung slings are replaced or recertified annually.
  - Verify slings are logged in the location's lifting register.

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**Synthetic Slings** – must have a valid certification tag clearly visible and free of any torn stitching, broken or cut fibers, discoloration or deterioration, and visibly exposed red fibers.

- **Operational Requirements**

- Synthetic Slings can be used when there is a fit for purpose application, when the application of wire rope slings will damage or not be capable of handling the load. Examples of where this is applicable are:
  - Hoisting electrical cable.
  - Hoisting hydraulic lines.
  - When the load is being welded on and the sling is away from the welding.
  - Heavy objects with a small diameter (D/d ratio issue).
  - Hoisting with extreme short headroom (Large wire rope slings cannot be manufacture short).
  - When there is a low coefficient of friction between the sling and the load to be lifted.
  - Loads that have specialized painted/chrome surfaces.
- Synthetic slings must not be used when:
  - Item(s) to be lifted has edges or rough surfaces.
  - Sliding along a load surface while under tension.
  - Temperatures exceeding 194°F/90°C.
  - Exposed to chemicals in the form of solids, liquids, gases, vapors, or fumes.
  - Sling rotation (fiber rope only).

- **Inspection Protocol**

- Pre-Use Inspections
  - Must be inspected by a Qualified Person to ensure the following do not exist:
    - Elongation, distorted components, heat damage.
    - Corrosion, severe nicks/gouges or metal loss.
    - Be logged in the location’s lifting register.
    - Have a legible tag marked with the working load and certification and manufacture date.
    - Check for proper configuration (the lifting assembly and associated hardware, as load tested).
    - Verify the sling has current certification.

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- Periodic Documented Inspections
  - File sling annual inspection records with certification papers.
  - Add tag or color coding to indicate the inspection date.
  - Verify slings are logged in the location's lifting register.
  
- Certification Tags Criteria
  - Sling Manufacturer
  - Rated Load for at least one hitch type and the angle upon which it is based
  - Grade
  - Size and Length
  - Number of legs, if more than one
  - Proof test certification number
  - Date of Proof test


Tag Lines must be used on all lifts except with lifts utilizing multiple cranes. Tag lines shall be used with other lifting appliances when deemed necessary through lift planning.

Taglines must be:

1. Made of fiber
2. A minimum of 10'
3. Free of knots
4. Without or free of frayed ends

**Alloy Chain Slings** - can be used when there is a fit purpose for application justifying the use and when approved by the PICL rated and certified for the intended use.

- **Inspection Protocol** – The QP shall complete frequent, undocumented inspections as follows:
  - Be inspected by a Qualified Person to ensure the following do not exist:
    - Elongation, distorted components, heat damage
    - Corrosion, severe nicks/gouges or metal loss
  - Be logged in the location's lifting register
  - Have a legible tag marked with the working load and certification and manufacture date
  - Check for proper configuration (the lifting assembly and associated hardware, as load tested)
  - Verify the sling has a current certification


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- **Periodic Inspection** – The QP shall perform and document periodic inspections as follows:
  - File sling annual inspection records with certification papers
  - Add tag or color coding to indicate the inspection date
  - Verify slings are logged in the location’s lifting register
- Alloy Chain Slings found with the following must be properly disposed of:
  - Cracked, bent, or elongated links or components
  - Cracked hooks
  - Shackles, eyebolts, turnbuckles, or other components that are damaged or deformed

**Spreader Bars and Special Lifting Devices** – Spreader bars are fabricated steel structures typically used to ensure that rigging connected between the bar/frame and the load is vertical. Unlike a spreader bar, special lifting devices are engineered for specific lifting applications.

The Qualified Person shall be instructed in the use of the device by a designated person. Instructions should include but are not limited to the following:

- Instructions for any special operations or precautions
  - The manufacturer’s recommended operating procedures
  - Store the lifter to protect it from damage
  - Do not exceed the rated capacity of the lifter
- **Inspection Protocol**
    - Pre-Use Inspections must be done by a Qualified Person to check for:
      - Damage, deformation, wear and cracks
      - Corrosion, severe nicks/gouges or metal loss
      - Security of weld / bolts
      - Check for proper configuration (the lifting assembly and associated hardware, as load tested).
      - Correct and legible tag information
  - **Periodic Inspections** - must have a tag or equivalent system in place to demonstrate adequate maintenance and inspection records (including date, time, etc. from lifting document) for any service, repair or modification which affects the safe performance of the equipment must be maintained and be readily available to the operator and maintenance personnel at all times.

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### Shackles

- Each shackle body and pin must be marked in raised and or stamped letters with the following clearly visible:
  - Manufacturer's trademark, name, code or logo
  - Rated Load
  - Size Identification code
- Frequent inspections must be done to check for any defects and to ensure that the shackle has the correct pin and fits properly.

### Hooks


- Hooks on all blocks, including snatch blocks, must have safety latches, which must be used each time a load is lifted.
- Welding is not permitted on any part of the hook.
- Hooks must only be used as an integral part of another lifting appliance/ accessory (i.e. synthetic slings, wire rope slings etc.)
- Must be certified for a working load limit equal to or exceeding the equipment to which they are a part of.
- Hooks twisted sideways more than 10deg. From the plane of the unbent hook must be discarded of
- Hooks opened more than 15% at the throat must be discarded properly

**Note:** Scissor locking type hooks (i.e. Shur-loc or Safety hook) are the only type permitted to be used on winches.

### **SUBPART M – DESIGNATED SIGNAL PERSON (DSP)**

A qualified signal person(s) must work with the hoist or crane operator when personnel assisting with the load are out of the range of the operator's vision, the moving load is out of the operator's vision, or the person in charge of the lift determines it to be necessary. The DSP must wear a high-visibility reflective vest that clearly distinguishes him/her from anyone else on the worksite.

Signals to the operator shall be in accordance with the standard hand signals unless voice communications equipment (radio, or equivalent) is used. Signals shall be discernible or audible at all times. Some special operations may require addition to or modification of the basic signals. For all such cases, these special signals shall be agreed upon and thoroughly understood, prior to the lift, by both

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the person giving the signals and the operator, and shall not be in conflict with the standard signals.


The operator will obey the emergency stop signal from anyone; however, under normal operations, only one person should be conveying signals.

## **SUBPART O - GENERAL SAFETY RULES**

Operators shall comply with the following rules while operating the cranes and equipment:

- Do not engage in any practice that will divert your attention while operating the crane.
- Respond to signals only from the person who is directing the lift, or any appointed signal person. Obey a stop signal at all times, no matter who gives it.
- Do not move a load over people. People shall not be placed in jeopardy by being under a suspended load. Also, do not work under a suspended load unless blocks, jacks, or a solid footing that will safely support the entire weight supports the load. Have a crane or hoist operator remain at the controls or lock open and tag the main electrical disconnect switch.
- Ensure that the rated load capacity of a crane's bridge, individual hoist, or any sling or fitting is not exceeded. Know the weight of the object being lifted or use a dynamometer or load cell to determine the weight.
- Check that all controls are in the OFF position before closing the main line disconnect switch.
- If spring-loaded reels are provided to lift pendants clear off the work area, ease the pendant up into the stop to prevent damaging the wire.
- Avoid side loading equipment. These can cause the hoist rope to slip out of the drum groove, damaging the rope or destabilizing the crane or hoist.
- To prevent shock loading, avoid sudden stops or starts. Shock loading can occur when a suspended load is accelerated or decelerated, and can overload the crane or hoist. When completing an upward or downward motion, ease the load slowly to a stop.



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- When working near powerlines reference the guidelines of 29 CFR 1910.333(c) (3), lines shall be de-energized, grounded or other protective measures shall be provided before work is started.

### **Moving a Load**

- Center the hook over the load to keep the cables from slipping out of the drum grooves and overlapping, and to prevent the load from swinging when it is lifted. Inspect the drum to verify that the cable is in the grooves.
- Use a tag line when loads must be controlled for better placement. Manila rope may be used for tag lines.
- Plan and check the travel path to avoid personnel and obstructions. Lift the load only high enough to clear the tallest obstruction in the travel path.
- Start and stop slowly.
- Land the load when the move is finished. Choose a safe landing.
- *Never* leave suspended loads unattended. In an emergency where the crane or hoist has become inoperative, if a load must be left suspended, barricade and post signs in the surrounding area, under the load, and on all four sides. Lock open and tag the crane or hoist's main electrical disconnect switch.

## **SUBPART P – PERSONNEL LIFTING**

When using equipment/cranes to hoist employees, the personnel platform has to have been built to appropriate industry standards and includes the following:

- Manufacturer's name and address
- Basket rating in terms of maximum weight and number of personnel allowed
- Identification number
- The weight of the empty basket
- Manufactured date
- must be equipped with a guardrail system and enclosed at least from the toe-board to mid-rail with either solid construction material or expanded metal having openings no greater than ½ inch
- Points to which personal fall arrest systems are attached

General Personnel Lifting rules:

- Lifted personnel must wear an approved Fall Restraint system when being hoisted over land along with all other standard PPE



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- when being hoisted over water, personnel must wear an approved PFD
- the hoisted person must maintain continuous communication the operator and or DSP
- NEVER stand, sit on , or work from the top rail, intermediate rail, or use any other device to enhance the vertical working height while in the basket
- Only one person may be lifted at a time
- The operator must operate at a slow and controlled manner
- All work baskets deemed unfit for use by inspection must be tagged "DO NOT USE" and taken out of service to be repaired or destroyed

A qualified person shall perform pre-use documented inspections in which he/she checks for defects, the suspension system, attachment point and identify conditions that have been specifically indicated by the manufacturer.

Revision Date: 02-11-10, 8-14-17

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Approved By: Joe Berry & Safety Committee

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# BBGCI 12 Questions for a Safe Lift

## Appendix I

**All 12 Questions below must be properly answered before a lift begins to help ensure the safety of all lifts.**

1. Does everyone know the person-in-charge of the lift?
2. Has everyone involved in the lift attended the toolbox talk?
3. Has a pre-use inspection of the lifting equipment been carried out and are the lifting accessories tagged or marked with:
  - a. Safe Working Load
  - b. A unique identification number
  - c. A valid certification date
4. Are all safety devices working?
5. Is everyone competent and aware of his or her tasks?
6. Is everyone aware of and do they fully understand the lifting and hoisting procedures applicable to the lift?
7. Are signaling methods and communication agreed and clear to you? Have separate (dedicated), Designated Signal Persons (DSPs) and rigger been assigned?
8. Is the lifting area controlled and is everyone clear of danger of the load falls or swings? Is the lift sponsor clearly identified?
9. Does everyone know the environmental limits (e.g. maximum permissible wind speed for the lift specific to each work location)?
10. Have the expectations and minimum requirements for Stop Work Authority been discussed?
11. Has the type of lift been identified and the proper work authorization been initiated (e.g., Job Safety Environmental Analysis [JSEA], Work Permits, Supervision Walk Through [SWT])?
12. Has a Designated Signal Person been identified and does everyone understand that with the exception of a STOP signal, signals will only accepted from the DSP?

**\*All employees involved with the associated lift must sign off on the back of this form!**

**Mobile Crane/Equipment Operators Certification number:**

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**Person in Charge of Lift (PICL)**

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# BBGCI LIFT CATEGORIZATION AND WORK AUTHORIZATION TABLE

## APPENDIX II

**Purpose**                      The purpose of this table is to describe the types of lifts and work authorization levels required to perform each type of lift.

Type of Lift	DESCRIPTION	Work Authorization Level			
		JSEA	PTW	LIFT PLAN - SPECIFIC	SWT
	<b>INCLUDES:</b>				
Routine	Lifts with known weight, shape, and center of gravity	X			
	Lifts performed under calm environmental conditions	X			
	Lifts using standard rigging and lifting equipment with a single lifting appliance with ample headroom	X			
	Lifts inside designated landing area	X			
	<b>INCLUDES:</b>				
Non-Routine (Simple)	Lifts over or within 6 feet horizontally of active or energized hydrocarbon-containing process equipment	X	X	X	X
	Lifts that expose a synthetic sling to dynamic, shock, or snatch conditions	X	X	X	
75% of cranes rated capacity	Lifts with awkward shapes, unbalanced weight, unknown/difficult to estimate weight, center of gravity, or a chance of being stuck (1)	X	X	X	
	Lifts into or out of confined spaces or shafts	X	X	X	
	Lifts requiring bypass of safety devices	X	X	X	X
	<b>INCLUDES:</b>				
Non-Routine Complex	Blind Lifts (1)	X	X	X	X
	Lifts using more cranes simultaneously (1)	X	X	X	X
50% of cranes rated capacity when lifting personnel	Lifts of expensive items, which would have an asset consequence of 4 or higher per mandatory documents on the <b>Risk Assessment Matrix (RAM)</b> (1)	X	X	X	X
	Lifts near overhead electrical power lines as defined by applicable regulations (1)	X	X	X	X
	Lifts with "special" non-standard rigging such as multiple sheave blocks or multiple spreader bars	X	X	X	X
	Lifts to upend or lay down (turn horizontal 90 degrees or vice versa) an object with a crane (1)	X	X	X	X
	Multiple Mobile Crane lifts (1)	X	X	X	X
	Lifts using both blocks of a crane (single load) (1)	X	X	X	X
	Temporary hoist foundation	X	X	X	X
	Personnel lifts in a suspended work basket (1)	X	X	X	X
	Personnel lifts with the intent of performing work from an aerial work platform	X	X		
(1) Mobile Crane Operators in training not allowed for these lifts unless, a fully competent operator is onsite mentoring the trainee					
(2) For personnel lifting involving Aerial Platforms (Man Lifts), the PIC shall approve, in writing, the use of the lifting appliances for each shift					
(3) Does not apply to <b>single well locations</b> where lifts are over or within 6 feet of the wellhead. Lifts made on multiple well locations or on locations covered by a Simultaneous Operations Plan (SIMOPS) requires a PTW					
JSEA - Job Safety Environmental Analysis					
PTW - Permit to Work					
SWT - Supervision Walk Through jobsite					

NOTE: This is an example of BBGCI's Complex/Critical Lift plan. The original plan is to be filled out on a computer in order to receive the appropriate computations of the lift.

**APPENDIX III**

Light Grey areas must be completed												
Lift Plan Category	[Non-Routine Critical (SIMPLE) (refer to RM TA2004 Lift Categorization and Work Authorization Table)]										Units:	
											U.S. (ft - lbs)	
Lift Description												
References	Lift Plan No.					JSA No.						
	Company/Contractor					Lift Plan Expires						
Lift plan number is Date + sequential number of lift plans for that day. (e.g. 01-15-2011-1)												
Asset Location												
Date and Time												
Lift Sponsor Name												
Supervisor Walkthrough	Yes	Not Required			Supervisor Name							
Communications	Radio	Hand Signals	Weather Conditions:									Hot
Emergency Contact Info	Shell Contact					Phone No.						
	Emergency Response No.											

Lift Information LHE #1					Lift Information LHE #2				
LHE Model:					LHE Model:				
Parts of line					Parts of line				
Jib Type					Jib Type				
Boom Length:			ft		Boom Length:			ft	
Hoist Line Pull:			lbs		Hoist Line Pull:			lbs	
Counterweight:			lbs		Counterweight:			lbs	
Boom Angle at Pick-up:			degrees		Boom Angle at Pick-up:			degrees	
Boom Angle at Set-down:			degrees		Boom Angle at Set-down:			degrees	
Radius at Pick-up:			ft		Radius at Pick-up:			ft	
Radius at Set-down:			ft		Radius at Set-down:			ft	
Weight of load:			lbs		Weight of load:			lbs	
Weight of rigging:		0	lbs		Weight of rigging:		0	lbs	
Weight of Additional Items:		0	lbs		Weight of Additional Items:		0	lbs	
<b>Total weight to be lifted:</b>		0	lbs		<b>Total weight to be lifted:</b>		0	lbs	
Capacity of Chart at Pick-up:			lbs		Capacity of Chart at Pick-up:			lbs	
Capacity of Chart at Set-down:			lbs		Capacity of Chart at Set-down:			lbs	
% of Chart Capacity:	Pick-up	#####	Set-down	#####	% of Chart Capacity:	Pick-up	#####	Set-down	#####
Ground Bearing Pressur	Allowable:		Actual:	PSF	Ground Bearing Pressur	Allowable:		Actual:	PSF
Mat size:	NA				Mat size:	NA			

RIGGING DATA (SIZE- TYPE-CAPACITY)	QTY:	WT./each	WT. TOTAL	RIGGING DATA (SIZE- TYPE-CAPACITY)	QTY:	WT./each	WT. TOTAL
Roll cradle			0 lbs	Roll cradle			0 lbs
Stinger w/hooks			0 lbs	Stinger w/hooks			0 lbs
			0 lbs				0 lbs
			0 lbs				0 lbs
			0 lbs				0 lbs
<b>ADDITIONAL WEIGHT ITEMS:</b>				<b>ADDITIONAL WEIGHT ITEMS:</b>			
Main Block		0	0 lbs	Main Block		0	0 lbs
Auxiliary Ball		0	0 lbs	Auxiliary Ball		0	0 lbs
Hoist Line		0	0 lbs	Hoist Line		0	0 lbs
Jib		0	0 lbs	Jib		0	0 lbs
Other		0	0 lbs	Other		0	0 lbs

Method of controlling the lift area (brief description)

<input type="checkbox"/> No-Go Zone Established	SSE: If less than 6 months, controls and approvals are in place
<input type="checkbox"/> Pre-job DROPS inspection	Does this job affect others and have they been notified?

Lift area controlled by spotters

NOTE: This is an example of BBGCI's Complex/Critical Lift plan. The original plan is to be filled out on a computer in order to receive the appropriate computations of the lift.

**APPENDIX III**

Extra safety measures to be considered for Critical (tick as applicable and detail in step-by-step). List is NOT INCLUSIVE.	
<input type="checkbox"/> Lifts over or within 6' (1.8m) of active or energized hydro carbon containing equipment.	Lifts using more than one lifting appliance
<input type="checkbox"/> Is there another route to avoid going over or within the equipment.	Is load rigged to prevent slippage during hand off.
<input type="checkbox"/> If the load bumped the equipment is there any instrumentation or valves whose breakage would cause damage or release.	Is each Appliance capable of handling the load on its own.
<input type="checkbox"/> Performed extra thorough pre-use inspection on all equipment associated with this lift.	Care for side loading of sheaves, blocks, trolleys etc...
<input type="checkbox"/> Lifts that expose a synthetic sling to dynamic shock or snatch conditions.	Lifts into or out of confined spaces or shafts.
<input type="checkbox"/> Document reason for no practical alternative to wire rope slings.	Extra care for blind lifting communications exercised.
<input type="checkbox"/> The working load limit is double the weight of the item to be lifted.	Extra riggers in place in strategic areas.
<input type="checkbox"/> Lifts with awkward shapes, unbalanced weight, unknown/difficult to estimate weight, center of gravity, or a chance of being stuck.	Additional person in cab to help watch load indicator.
<input type="checkbox"/> Load indicator used to verify weight not to exceed capacity of lifting appliance.	Lifts requiring bypass of safety devices.
<input type="checkbox"/> Auxiliary devices introduced to free stuck object.	ADDITIONAL MANAGEMENT APPROVAL OBTAINED?
<input type="checkbox"/> If unable to easily determine the COG move to complex lift.	Qualified person to perform adjustment or bypassing.
	Additional personnel added to monitor.

Extra safety measures to be considered for Complex Lifts (tick as applicable and detail in step-by-step). List is NOT INCLUSIVE.	
<input type="checkbox"/> Lifts of expensive items, which would have an asset consequence of 4 or higher per the Risk Assessment Matrix.	Lifts near overhead electrical power lines as defined by applicable regulations.
<input type="checkbox"/> Get SME or designee input.	Ensure allowed by local operating procedures.
<input type="checkbox"/> All special lifting devices reviewed by Lift Sponsor.	Reference local regulation documentation for proper distances.
<input type="checkbox"/> All special lifting devices certified and inspected.	Post extra watch person as needed.
<input type="checkbox"/> Consider increasing safety factors of lifting accessories.	De-energize if possible.
<input type="checkbox"/> Multiple Mobile crane lifts	Lifts using both blocks of one crane.
<input type="checkbox"/> Get SME or designee input.	Check operators manual for requirements.
<input type="checkbox"/> Both crane operator fully experienced in tandem lifts.	Both falls must be capable of carrying the full load.
<input type="checkbox"/> DSP competent and experienced in tandem lifting with cranes.	Rigging certified and inspected.
<input type="checkbox"/> Lifts with "special" non-standard rigging such multiple sheave blocks or multiple spreader bars.	Normal Man-riding operations (between monkey board and rig floor).
<input type="checkbox"/> Get SME or designee input.	Pre-start checklist filled out.
<input type="checkbox"/> All lifting devices certified and inspected.	All safety devices operational.
<input type="checkbox"/> Lifts from uncertified lifting points outside of the scope of RM TA2003 Structural/Piping Guideline Load Matrix.	Temporary hoist foundation.
<input type="checkbox"/> Get SME or designee input.	Get SME or designee input.
<input type="checkbox"/> Perform NDE and Inspection per Engineers instructions.	Tie down performed per Engineers instruction.
<input type="checkbox"/> Use rigging accessories certified and inspected.	NDE performed on base per Engineers instruction.
<input type="checkbox"/> Personnel lifts in a suspended work basket.	Lifts to upend or lay down (turn horizontal 90 degrees or vice versa) and object with a crane.
<input type="checkbox"/> Adhere to requirements of HSE0044B-OW-PR01 Fall Prevention and Protection (Wells)	Get SME or designee input.
<input type="checkbox"/> Pre-use inspection performed by Qualified Person.	Blind Lifts
<input type="checkbox"/> Locking latch on crane hook.	Follow blind lifting procedures in RM 2.00.05 Mobile Lifting Equipment Requirements.
<input type="checkbox"/> Test lift made with weight.	Operator and DSP survey area for potential hang points and other haza
<input type="checkbox"/> Ground conditions are suitable per the requirements.	Keep DSP in visual sight of the operator if at all possible.

NOTE: This is an example of BBGCI's Complex/Critical Lift plan. The original plan is to be filled out on a computer in order to receive the appropriate computations of the lift.

**APPENDIX III**

Lifting of personnel / Complex		
<input checked="" type="checkbox"/> Prevention of person(s) becoming stuck/trapped	Environmental hazards	Site-specific procedures
<input checked="" type="checkbox"/> Prevention of person(s) falling/being crushed	Correct PPE/harnesses/etc.	Efficient means of rescue
<input type="checkbox"/> Communications between passengers/operator	Trained/competent personnel	Limiting conditions of use
<input checked="" type="checkbox"/> Suitability of equipment and accessories	Certification/pre-use checks	

Sketches (may be part of Safe Work Plan and attached if applicable)  
 Sketch detailing the set-up of the lifting equipment and lifting accessories (*REQUIRED*)

Debrief and learning points (*did the lift go as planned or are changes to the lift plan required?*)

Lift Sponsor	Print Name(s)	Signature(s)	Date
PICL	Print Name(s)	Signature(s)	Date
LHE Operator	Print Name(s)	Signature(s)	Date
Mobile Crane #1 Operators Certification number:	Print Name(s)	Certification Number:	
Mobile Crane #2 Operators Certification number:	Print Name(s)	Certification Number:	
Designated Signal Person	Print Name(s)	Signature(s)	Date
Participant	Print Name(s)	Signature(s)	Date
Participant	Print Name(s)	Signature(s)	Date
Participant	Print Name(s)	Signature(s)	Date
Participant	Print Name(s)	Signature(s)	Date