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### Radio Signals for Cranes and Derricks

In recent years, two-way radios have become popular for signaling crane and derrick operators. This allows the operator to keep his eyes on the load, boom and load path of travel and not on the signal person. This method of signaling is most often used when the operator cannot see the load on the hook or signal person. The operator must depend on the signal person to be his eyes and communicate in a clear understandable language what direction and distance to move the load.

#### Safety Rules For Basic Radio Signals for Cranes and Derricks

Most cranes and derricks have the capability of doing two or more operations at the same time. (e.g. Swing Right and Up on Hoist, Swing Left and Down on Hoist, etc.). These commands should be used with caution and only when the load is in full view of the operator or with an empty hook.

Once the lift has begun, the signal person should use constant communication (i.e., never releasing the key to the microphone). The signal person will slowly repeat command over and over, reassuring the operator that everything is clear and the lift is progressing as planned. If the signal person breaks communication, the operator shall stop all operations. Before continuing the lift, the operator must acknowledge the signal person by name and re-establish communication with the signal person.

If the operator sees a problem with the lift and needs to communicate with the signal person, the operator must stop the operation. When the operator stops the operation, the signal person will un-key the microphone, allowing the operator to communicate the problem.

Anyone seeing a problem can stop the lift by alerting the operator or signal person or by giving the emergency stop signal.

Additional safety rules for using radios for signaling cranes and derricks are:

- The supervisor, operator and signal person should discuss the lift plan and agree on how the lift will be made.
- The radios should be tested to assure proper working order and the channel is clear of outside interference. Extra batteries or radios might be needed if extended communication is expected.
- The signal person shall begin each instruction by calling the operators by name. This is even more important when two or more cranes are used in the lifting operation.
- The operator shall respond by acknowledging the signal person by name.
- The signal person should always give the approximate distance the load will be moved.
- At the completion of each command, the signal person will stop the operation by saying, "**All Stop**".

#### Standardized Voice Signals

- **Hoisting And Lowering The Load:** If the crane or derrick is equipped with more than one load hoist and the lift requires the use of both, the signal person must instruct the operator to **Use Main Block**, or **Use Auxiliary Hoist (Whip line)**. The following commands shall be given to hoist (raise) and lower the load: (i.e. "Main block Up", "Main block Down", "Whip line Up", "Whip line Down", etc.)



- **Using The Boom:** The following commands shall be given to raise and lower the boom: (i.e. "Boom Up", "Boom Down").
- **Using The Boom and Hoist:** The following commands shall be given to raise/lower the boom and raise/lower the load at the same time: (i.e. "Boom Up and Hold Load Level", "Boom Down and Hold Load Level"). **NOTE: This command should never be given when operator cannot see the load.**
- **Extending and Retracting Boom:** The following commands shall be given to extend/retract boom: (i.e. "Boom Extend Out", "Boom Retract In").
- **Extending and Retracting Boom and Using Hoist:** The following commands shall be given to extend/retract boom and hoisting up/down on load: (i.e. "Boom Extend Out and Hold Load Level", "Boom Retract In and Hold Load Level"). **NOTE: This command should never be given when operator cannot see the load.**
- **Swing The Boom:** The following commands shall be given to swing boom right and left: (i.e. "Swing boom to your Right", "Swing boom to your Left"). **NOTE: Always give direction to the operators (Right or Left)**