



SAFETY MANAGEMENT MANUAL

ATL 6.3 R/V ATLANTIS CRANE OPERATIONS

Originator:	Approved By:
Theophilus Moniz III	Albert F. Suchy

1. Purpose

The purpose of this procedure is to set forth the standards for the qualifications for crane operators on the R/V Atlantis.

The safety of this operation whether in port or at sea is of the utmost importance.

2. Responsibility

The Chief Mate shall ensure that all operators are properly trained. The Bosun or Relief Bosun will direct the practical training and assessing of an operator.

3. References

North American Crane Manual
Morgan Articulating Knuckleboom Crane
Atlantis Hand Signals (posted on board)

4. General

A. Prior to conducting any crane operations:

1. The operator must conduct a visual inspection of equipment including rigging.
2. The operator must perform an operational function test. [See pre-operational inspection guidelines].
3. A pre-evolution conference is held to explain the nature of any non-routine lifts.
4. An operator shall know the weight of the pick, the radius of the boom and angle of elevation prior to hoisting.
5. The weight of a lift shall be known and shall be confirmed by the 3PS Load Indicator.
6. In the event that the weight of the pick differs greatly from the Load Indicator or is all together unknown, the Safe Working Load (SWL) shall be worked out as per the boom angle and radius of load. The SWL shall not be exceeded as per the 3PS Load Indicator. A Dynamometer can be used to check the 3PS Load Indicator if in doubt of its accuracy.
7. In the event that a load may be approaching the capacity of the crane based on weight or reach, the operator should first attempt to lift the load using the luffing cylinders. If the crane struggles or fails to pick up the load, this will indicate that this load is beyond the lifting capacity of the crane. When at or near the capacity of the crane, the operator needs to avoid increasing the reach of the load as this will cause the lift to exceed the capacity of the crane.



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8. The operator must understand the difference between “Static” and “Dynamic” load charts provided by North American Crane. The crane operator must be aware of the following “static conditions,” as defined by the crane manufacturer:

- The vessel is at 0 degree list and trim
- The vessel’s proper amount of ballast has been added, if required.
- The weight of the tackle has been considered as part of the load.
- The sea state condition is 0 (zero)
- The vessel remains stable during lift
- The operator controls the crane smoothly
- The load does not exceed 2 degree maximum vertical and horizontal out of plane.

The static conditions are usually obtained with the vessel at the dock or at anchor in a protected body of water. The operator shall take into consideration the conditions above in determining if any of these conditions require the operator to refer to the dynamic load chart in lieu of the static load chart.

9. Permission from the Mate on Watch is required prior to putting gear/equipment overboard.

B. General Crane Operations

1. Obey **all** stop commands
2. Observe all safety requirements [See operator’s instructions in references]
3. Never swing a load above personnel
4. Use appropriate load charts
5. Avoid sudden or abrupt stops and starts
6. Monitor boom extensions and boom angles while operating the crane
7. Make sure the hook is centered directly above the load before lifting
8. Do not drag the load with boom
9. Do not side load or off lead the boom
10. Keep loads as close to the deck as practicable
11. Do not operate the crane in electrical storms or in heavy winds
12. Never two-block
13. Always maintain at least three full turns of wire on the drum
14. **Always** wear appropriate PPE

C. Training will consist of:

1. An introduction to the equipment – identifying the major components/parts, and maintenance required.
2. Observing a qualified operator handle the equipment, then having a qualified operator observe the trainee handling the equipment.



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- a. The trainee will begin with relatively easy picks – in sight of load, working up to blind picks then personnel.
- b. Whenever possible, the trainee will start with shore (static) operations then at-sea (dynamic) operations
3. A review of written material from the technical manuals referred to above
4. A practical test.
5. A written test.

5. Record

Upon completion of the above requirements to the satisfaction of the Mate, "Crane Operator" will be added to the Training Section of the crewmember's personnel record in NS5.



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CRANE OPERATOR CHECKLIST

CRANE #	DATE
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WALKAROUND	S	U	OPERATIONAL	S	U
SAFETY GUARDS & PLATES			GAUGES/ WARNING/ INDICATOR LIGHTS		
STRUCTURE/ BOOM			CONTROLS / FUNCTIONS		
CYLINDERS			ANTI- TWO BLOCK		
WIRE / REEVING			LIMIT SWITCHES		
BLOCKS / HOOKS/ SHEAVES			LIGHTS		
LADDER / HANDRAIL			HORN / WIPERS		
LEAKS / OIL/ HOSE					
ANGLE INDICATOR					
LOAD CHARTS			DYNAMOMETER		
FIRE EXTINGUISHER					

REMARKS

OPERATOR SIG.
USE
VOYAGE
WX CONDTs