



M&A Safety Services

512 Viaulet Road
Youngsville, Louisiana 70592
Main: 337-451-4685
Fax: 337-451-5847
www.masafetyservices.com

Air Winch Safety

Course Outline

Prerequisites: This course shall have no formal pre-requisite. The individual should have no history of a disabling medical condition, which may be sufficient reason for disqualification.

Course Length: 3-4 hours – Course length shall vary depending on the number of delegates. Total course time includes breaks.

Class Size: The maximum number of delegates that may be trained and tested per instructor shall be thirty-five (35) in the classroom session and twenty (20) in the practical session. A second instructor shall be added for the practical session once the participation exceeds twenty (20) and exercises will be divided into groups.

Course Objective

-) Provide delegates assigned to operate industrial Air Winches the necessary skills to safely perform their jobs.
-) Provide delegates with recommended industry practices to allow safe work with Air Winches.
-) Delegates should be able to demonstrate the necessary skills during practical examination and demonstrate knowledge during written examination.

Course Design

-) Power Point© / Lecture / Audio Video / Visual Aids
-) Demonstrations
-) Practical Exercises

Successful Course Completion

-) Requires a minimum score of 75% or better.
-) Grades shall be calculated by dividing the number of questions answered correctly by the total number of exam questions.
-) Delegates will have no more than thirty (30) minutes to complete the exam.
-) Successful completion of practical session is mandatory.

Course Content Summary

-) Classroom
-) Practicals

Breaks: 10 minutes (approximately every hour)

Lunch: 1 Hour (if applicable)



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Course Outline

About Air Winch

-) Why Training?
-) Common Air Winch Applications
-) Definitions
 - o Qualified Operator
 - o Qualified Inspector
 - o Qualified Rigger
 - o Pre-Use Inspection
 - o Red Zone
-) Air Compressor Terms
 - o Pounds Per Square Inch (PSI)
 - o Absolute Pressure
 - o Cubic Feet Per Minute (CFM)
 - o Standard Cubic Feet Per Minute (SCFM)
 - o CFM/PSI Example
-) Operator Requirements
-) Roles and Responsibilities
 - o Facility Manager/Yard Manager/Offshore Manager
 - o First Line Supervisor/Superintendent
 - o Winch Operator
 - o Signal Person
 - o Personnel Working Near Equipment

Air Winch Safety

-) Safety Devices
-) Personal Protective Equipment (PPE)
-) Barricading the Work Area
-) Air Winch Installation Requirements
 - o Pre Installation Requirements
 - o Securing Air Winch
 - o Power Supplies
-) Air Compressors
 - o Installation
 - o Requirements
 - o Test Certificates
 - o Air Supply Information
 - o Calculating Air Flow
-) Snatch Block
 - o Requirements
 - o Snatch Block Examples



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- Selection
-) Proper Sheave/Wire Rope Requirements
 - Sheave Inspection
 - Wire Rope Spooling
 - Spooling Examples
 - Wire Rope Maintenance
 - Wire Rope Alignment Techniques

Air Winch Inspection

-) Pre-Use Inspection
 - General Air Winch criteria/examples
 - Wire Rope
 - Synthetic Web Slings
 - Polyester Round Slings
 - Inspection Form Example
-) Function Test

Air Winch Operation

-) Winch Capacity
-) Winch Speed
-) Winch Operation
 - Pre Operations
 - Post Operations
 - Winch Brake
 - Winch Operations Example
 - Load Control/Tag Lines

Hand Signals

-) Signal Person Requirements
-) Hand Signal Review

Practical Session

Practical training shall utilize an air winch, various slings, loads & rigging techniques.

Practical shall verify that the delegate has the ability to complete the following:

-) Select and wear appropriate PPE during practical training
-) Inspect and identify damaged hardware/rigging gear
-) Select the appropriate hardware/rigging gear to complete required lifts
-) Communicate with the operator using proper hand signals
-) Use tag lines properly to control loads
-) Select the appropriate rigging techniques to complete the required lifts



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-) Place load(s) in appropriate locations (outside of walkways)
-) Maintain hand/body position absent from hazards (pinch points)
-) Prevent anyone from standing under a suspended load
-) Safely work with others as a team
-) Store hardware/rigging gear properly following its use

Training Center Provided Material

-) PPE
-) Rigging Material

Delegate Requirements

-) Air Winch shall be provided by the customer at a customer location
-) Must possess good physical health as the practical training is physical demanding.

Reference Material / Documents

Recommended Industry Practices
API RP 2D 7th Edition
OSHA Construction Rigging