

**MATERIALS HANDLING, STORAGE EQUIPMENT, AND
LIFTING TECHNIQUES
AFOSH STD 91-46 & AFOSH STD 91-501, Chapter 4**

1. Has a training program been developed on manual lifting and carrying methods and techniques and is this training documented according to AFI 91-301? (Reference paragraph 1.2.1)
2. Are annual inspections of manual hoisting or pulling devices documented with identification tags and include appropriate information? (Reference paragraph 2.2.2.3)
3. Have training outlines been developed, qualified personnel identified as instructors, and has training on the operation of powered industrial trucks been conducted? (Reference paragraph 3.2.4.1)
4. Are material handling and lifting equipment inspected prior to use by the operator? (Reference paragraph 2.2.2)
5. Are safety pallets used to lift personnel designed correctly? (Reference paragraph 3.2.2)
6. Are gasoline/diesel powered industrial trucks or other material handling equipment provided appropriate parking and refueling areas? (Reference paragraph 3.3.1, 3.3.3, 3.3.4)
7. Are battery charging areas for electrically powered material handling equipment designed according to this standard and the NFPA 503, Section 5-3? (Reference paragraph 3.3.2)
8. Do the conveyors have all of the required design and safety features required by this standard? (Reference paragraph 4.2)
9. Are all personnel trained on procedures for operation conveyors? (Reference paragraph 4.2.4 and 4.2.5)
10. Are hoists operated only by qualified personnel who are trained and certified? (Reference paragraph 5.2.3.1.1)
11. Are there records of all operational, rated, and proof load tests? (Reference paragraph 5.2.4.1)
12. Have lockout and or tagout procedures been developed for use with maintenance activities? (Reference paragraph 5.2.4.3 and AFOSH Standard 127-45)

13. Are periodic inspections performed on an interval of 1-12 months? (Reference paragraph 5.2.5.2)
14. Are records of inspections of hoists, chains, and ropes maintained? (Reference paragraph 5.2.5.4)
15. Are slings inspected each month and documented? (Reference paragraph 6.2.2)
16. Are slings inspected yearly and tagged properly? (Reference paragraph 6.2.2.3.3)
17. Are slings initially proof load tested at 200 percent and a record of the most recent test maintained on file? (Reference paragraph 6.2.3.1)
18. Are lifting devices used to perform critical load lifts proof load tested to 200 percent annually? (Reference paragraph 6.2.3.5)
19. Is the rated load plainly marked on each crane? (Reference paragraph 7.2.2.2)
20. Are the standard hand signals posted on or near all cranes? (Reference paragraph 7.2.4.6 and Figure 7-1)
21. Are hazardous energy control (lockout and or tagout) procedures developed and used during maintenance activities? (Reference paragraph 7.2.4.4 and AFOSH Standard 127-45)
22. Have all cranes received the required load tests and are these test reports documented and available? (Reference paragraph 7.2.5.6.2)
23. Do operators perform a visual inspection of the crane prior to use? (Reference paragraph 7.2.5.7.1)
24. Are periodic inspections performed on an interval of 1-12 months? (Reference 7.2.5.7.2)
25. Is there a clearly legible rating chart located in view of the operator in the crane cab? (Reference paragraph 8.2.1.2.1)
26. Is there a warning permanently posted in the cab of the crane which states: "DANGER - HIGH VOLTAGE, DO NOT OPERATE WITHIN 10 FEET OF ELECTRIC POWER LINES?" (Reference paragraph 8.2.1.2.11)
27. Have man-rated cranes been approved prior to acquisition? (Reference paragraph 8.2.1.2.13)
28. Are daily, monthly, and annual inspections being conducted and documented? (Reference paragraph 8.2.2)

29. Are records of all load tests available? (Reference paragraph 8.2.3.1.5)
30. Are energy control (lockout/tagout) procedures developed and used during maintenance activities? (Reference paragraph 8.2.3.2 and AFOSH Std 127-45)
31. Is there a procedure developed to provide safe operations in the vicinity of electrical power lines? (Reference paragraph 8.2.6.39)
32. If an approved crane is used to lift personnel, is the platform used to suspend personnel designed correctly? (Reference paragraph 8.2.6.50 and 29 CFR 1926.550)
33. Are wire rope inspections conducted at least monthly and records maintained on file by the user? (Reference paragraph 9.1.3.1)
34. Are chains inspected before each use and monthly and are these inspection documented? (Reference paragraph 9.2.1.4)
35. Are hooks used with hoisting equipment inspected daily or before each use? (Reference paragraph 5.2.5.1)
36. Are hooks inspected monthly with documentation? Reference paragraph 9.4.1)
37. Is a preventive maintenance program established for derricks and are these maintenance activities documented? (Reference paragraph 10.4)
38. Are energy control (lockout/tagout) procedures established and followed during maintenance tasks? (Reference paragraph 10.4.2.1.5)

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1. Does training instruction include information such as what PPE is required, what manual lifting devices are available and their proper use? (Reference paragraph 4.4)
2. Are materials handling activities kept to a minimum through the application and use of engineering controls when possible? (Reference paragraph 4.5.1)
3. Are loads to be lifted manageable in both size and weight distribution? (Reference paragraphs 4.6 & 4.8.4)
4. Are objects to be lifted inspected for grease or other slippery substances that might cause a worker to mishandle the object or get injured during a movement? (Reference paragraph 4.6.1.1)
5. Do individuals seek assistance when is necessary to move heavy or odd shaped items? (Reference paragraph 4.6.3)

6. Are workers properly trained in team lifting techniques when they will be lifting heavy or odd shaped items? (Reference paragraph 4.6.3)
7. Are protective gloves and protective footwear provided and used when needed to protect the hands and feet of workers involved in manual materials handling activities? (Reference paragraph 4.7.1)
8. Are wheeled hand trucks and dollies loaded so that the cargo is stable and the loads won't fall? (Reference paragraph 4.9.1.1.4)
9. Are hoists equipped with a device (ratchet and pawl or load brake) that prevents a suspended load from self-lowering and ensures loads are only lowered by operation of the hoist lever? (Reference paragraph 4.9.3.1.2)
10. Are only approved lifting devices like slings used to lift loads and not hoist cable, rope, or chain wrapped around the load? (Reference paragraph 4.9.3.6.2)
11. Are materials neatly stacked and the height limited to minimize the possibility for the materials to fall or collapse? (Reference paragraph 4.13.1)