



Helicopter

Guidelines

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Helicopter Instructions

We do minimal work using outside contract work for material lifts utilizing helicopters. The following are guidelines set for this exposure.

Supervisor Instructions

1. Prior to the start of any operation involving the use of a helicopter, a thorough survey of any conditions and hazards on the job site will be made by the supervisor and/or the project manager in conjunction with the pilot, or pilot's representative, to ensure a safe operation.
2. A daily briefing shall be conducted prior to starting work to set forth the plan of operation for that day. This briefing shall include planning to minimize possible hazards of the day's operation and all personnel exposed shall be informed and directed as to safeguards and escape procedures. This briefing shall also include a review of the Helicopter Code of Safe Practices and will be documented by the company supervisor.
3. If the helicopter pilot in command, for any reason, believes that a lift or operation cannot be performed safely, then that lift or operation shall not be attempted.
4. Only helicopters with current valid F.A.A. certification will be allowed on the job site. A copy of this certification will be kept on the job site and in the office.
5. The pilot's employer (helicopter subcontractor) shall ascertain before operations begin that the pilot has proper certification by the F.A.A. and qualified to perform the planned operations. A copy of this certification will be kept on the job site and in the office.
6. Helicopter operations shall not be performed beyond the helicopter's manufacturers approved external load capacity. As needed, include calculations for downwash. **DO NOT** exceed rated capacity.
7. Landing and hovering sites shall be chosen with approval of the pilot or pilot's representative.
8. All such landing and hovering sites shall have at least a 200-foot diameter area clear of all loose materials and objects that could be hazardous if displaced by rotor downwash. The helicopter shall be required to deposit or lift loads in the center of the approved area.
9. Precautions shall be taken by the helicopter subcontractors to eliminate reduced visibility, as far as practical.
10. Access and egress to the helicopter shall be from the front and along the same level or to a level lower than the helicopter. No one shall be permitted to approach or leave the helicopter while the engine is running or the rotor is turning without a permissive signal or instruction from the pilot or pilot's designee.
11. Built-up landing sites shall be capable of supporting a helicopter on any single square foot of the landing surface and provide good footing.
12. Prepared landing sites on hillsides shall be no less than 12 feet by 12 feet and shall be large enough to land the helicopter so that the largest rotor clears the hillside by a distance equal to its radius measured horizontally from the tip of the rotor.
13. The helicopter subcontractor shall provide an effective method of protecting workers from static electrical discharge. One option is to use insulated #6 stranded copper 15' long with crook on one end (to hook over landing gear) and attach to a 12" steel stake driven or buried below ground surface.
14. When possible, the helicopter subcontractor shall conduct all fueling operations prior to arriving on the job site. If refueling is needed, the helicopter subcontractor will:

- Make sure the engines and radio transmitters are shut off. In addition, smoking, open flame or other source of ignition shall not be permitted within 50 feet of fueling operations or fuel storage areas. The only exception is for F.A.A. approved alternate fueling methods or closed circuit hot refueling.
 - Make sure the helicopter and fuel supply are securely bonded and grounded before and during fueling operations for static electrical discharge.
 - Make sure there are two 60 B:C rated fire extinguishers or equivalent firefighting protection at each fueling station attended by ground crews.
15. The supervisor shall inform the pilot of the erection of any newly suspended line or other navigational hazard on the project or in the area of helicopter operations.
 16. Company employees are to defer all direction of the helicopter to the helicopter crew. Do not direct, guide instruct or otherwise attempt to signal the helicopter.
 17. Check with the helicopter crew so they can instruct you on the signal systems to be used including any use of radio and hand signals.
 18. All ground crewmembers shall be thoroughly instructed by the pilot, or pilot's representative, in their duties and of the immediate hazards. Escape procedures shall be planned with the pilot, or pilot's representative, in the event of helicopter failure.
 19. Ground crewmembers shall wear dust goggles for eye protection and approved head protection with chinstraps in place. Ear protection and gloves are also required, Dust protection, where required, shall be in accordance with applicable safety orders.
 20. Where the surrounding area is sandy or dusty, the ground must be watered down at a time period of no greater than 15 minutes prior to the helicopter's arrival. In addition, the ground must continue to be watered down at a frequency of 15 minutes.
 21. Only those persons associated with the helicopter operations shall be permitted to approach within 50 feet of the operating helicopter. In addition, federal regulations require that anyone not associated with the lift be kept clear from the flight path of the helicopter and/or in areas where materials are to set.
 22. All cargo shall be loaded and secured under the direction of the pilot or pilot's designee.
 23. Passengers are not allowed to be transported by helicopter except in case of emergency.
 24. All sling loads, including line-stringing devices, shall be attached only to quick-release devices. Steel or metallic sling ends shall be of the pressed sleeve or swedged eye-type, or equivalent. Tag lines shall be of a length or secured in such a manner that will not allow their being drawn up into the rotors.
 25. Automatic release devices are prohibited in all construction operations where ground crews are used. The devices shall be activated only for actual placement of loads. Electrical release devices shall have mechanical backup, be checked each day of operation by the helicopter subcontractor, and be designed to prevent inadvertent operation.
 26. External sling load operations shall not be performed if electrical storms in the immediate vicinity make the work unsafe.
 27. Load landing operations shall not be performed when the pilot or ground crew deems the wind conditions too unsafe.
 28. There shall be a minimum clearance of at least 25 feet between an energized power line, rated 50KV or below, and any part of the rotorcraft load combination. This clearance requirement shall increase at the rate of ½ inch for each 1KV.
 29. Watch loads at all times-if you need to look around, stop the load first.
 30. Never leave helicopter with a load suspended.
 31. Avoid lifting over equipment, vehicles, or personnel whenever possible.
 32. Be aware of pinch points.

33. While working at the edge of, or on a steep slope, members of ground crew shall be protected from falling by:
 - A barrier of adequate design to restrain a falling person or;
 - A safety harness with a quick-release buckle and a lifeline at least 50 feet long. Where practicable when using safety harnesses, the area shall be cleared of objects that might snag the lifelines in an escape procedure.
 - Always follow proper fall protection regulations when in a situation where fall protection/prevention is required.
34. Ground crews on elevated surfaces more than 7 ½ feet high shall be protected against being swept off by rotor downwash.

Appendix Plate C-36-A Safe Practices--Helicopters

1. Do not approach or leave a helicopter while its engines are running unless in a crouched position and the pilot or pilot's designee signals that it is safe to do so.
2. Always approach and leave the helicopter in plain view of the pilot or as directed by the pilot's designee; never from the rear.
3. Approach and leave the helicopter on a level with the craft or a lower level, never from or to higher ground than that of the helicopter.
4. Wear goggles and head protection with chin strap under the chin when in the vicinity of an operating helicopter. Loose-fitting clothing likely to flap in the downwash and possibly be snagged on the hoist line shall not be worn.
5. Load all cargo and secure it to the satisfaction of the pilot or pilot's designee.
6. Do not put tag lines on sling loads without the pilot's or pilot's designee's permission and limit their numbers, their placement, and their lengths to the pilot's satisfaction.
7. Do not place explosives, flammables, or other dangerous materials on board any aircraft without the pilot's knowledge.
8. Carry all materials to or from the helicopter in a horizontal position not above waist level.
9. Do not smoke within 50 feet of a helicopter, fuel storage, or fueling operation.
10. Do not stand directly under a hovering helicopter longer than necessary to hook-up or unhook the load.
11. Always watch the helicopter, sling load, hook, or bottom end of the cable to avoid being hit.
12. Know the escape procedure at each operation site.
13. Keep landing and hovering areas clear of loose and lightweight materials.
14. Notify the person in charge of the project when erecting a suspended line, tower or other navigational hazard.
15. Turn off radio transmitter when in vicinity of explosives or explosive loading operations.
16. Passengers transported by helicopter shall be instructed to:
 - (A) Board and depart only on instruction from the pilot.
 - (B) Use seat belts during take off, flight, and landing.
 - (C) Do not talk unnecessarily to the pilot.
 - (D) Remain seated during the time you are aboard.
 - (E) Watch for other airborne aircraft and navigational hazards and call them to the attention of the pilot.
 - (F) Do not smoke unless permitted by the pilot.
17. When performing as a crew member in external operations, listen to and be familiar with the

normal sounds emitted by the helicopter in flight so that you will have the earliest notice of trouble and can avoid dangerous exposure.

(18) When visibility is reduced by dust or other conditions, ground personnel shall exercise special caution to keep clear of main and stabilizing rotors.

Cal OSHA Regulations 05/2017

§1901. General Requirements.

(a) Prior to the start of any operation involving the use of a helicopter, a thorough survey of the conditions and hazards on the job site shall be made by the employer in conjunction with the pilot or pilot's representative to ensure a safe operation.

(b) A Code Of Safe Practices shall be formulated and enforced for operations involving the use of a helicopter. This code shall include, but is not limited to, the safe practices presented in Appendix Plate C-36-a.

(c) A daily briefing shall be conducted prior to starting work to set forth the plan of operation for that day. This briefing shall include planning to minimize possible hazards of the day's operation and all personnel exposed shall be informed and directed as to safeguards and escape procedures.

(d) If the helicopter pilot in command for any reason believes that a lift or operation cannot be performed safely, then that lift or operation shall not be attempted.

(e) Helicopter operations shall not be performed beyond the helicopter's approved external load capacity or pilot's certification. The pilot's employer shall ascertain before operations begin that the pilot is properly certificated by the F.A.A. and qualified to perform the planned operations.

§1903. Landing Operations

(a) Landing and hovering sites shall be chosen with approval of the pilot or pilot's representative.

(b) All such sites shall have at least a 200-foot diameter area clear of all loose materials and objects which could be hazardous if displaced by rotor downwash. The helicopter shall be required to deposit or lift loads in the center of the approved area.

(c) Precautions shall be taken by the employer to eliminate as far as practical reduced visibility.

(d) Access and egress to the helicopter shall be from the front and along the same level or to a level lower than the helicopter. No one shall be permitted to approach or leave the helicopter while the engine is running or the rotor is turning without a permissive signal or instruction from the pilot or pilot's designee.

(e) Built-up landing sites shall be capable of supporting a helicopter on any single square foot of the landing surface and provide good footing.

(f) Prepared landing sites on hillsides shall be no less than 12 feet by 12 feet and shall be large enough to land the helicopter so that the largest rotor clears the hillside by a distance equal to its radius measured horizontally from the tip of the rotor.

EXCEPTION to Section 1903: Except in an in-flight emergency.

§1907. Ground Crew

(a) All ground crewmembers shall be thoroughly instructed by the pilot or pilot's representative in their duties and of the immediate hazards. Escape procedures shall be planned with the pilot or pilot's representative in event of helicopter failure.

(b) Ground crewmembers shall wear dust goggles for eye protection and approved head protection with chin straps in place. Ear protection and dust protection where required shall be in accordance with applicable safety orders.

(c) Only those persons associated with the helicopter operations shall be permitted to approach within 50 feet of the operating helicopter.

§1908. Cargo Loading and Handling

(a) All cargo shall be loaded and secured under the direction of the pilot or pilot's designee.

(b) No passenger shall be transported in the helicopter with a sling load and no person shall be transported as an external or sling load, except in an emergency.

Exception: Unless authorized by the F.A.A.

(c) Explosives and other "dangerous materials" shall not be transported except as authorized by F.A.A.

(d) All sling loads, including line stringing devices, shall be attached only to quick-release devices. Steel or metallic sling ends shall be of the pressed sleeve or swaged eye-type, or equivalent. Tag lines shall be of a length or secured in such a manner that will not allow their being drawn up into the rotors.

(e) Automatic release devices are prohibited in all construction operations where ground crews are used. The devices shall be activated only for actual placement of loads. Electrical release devices shall have mechanical back-up, be checked each day of operation, and be designed to prevent inadvertent operation.

(f) When stringing conductive lines or conductors, there shall be radio communication between the helicopter and the ground crew.

(g) When stringing lines or conductors close to or parallel to energized lines, conductive lines or reels, pay-out machines, and conductors shall be grounded as required by the High Voltage Electrical Safety Orders. Hoist wires or other gear shall not be attached to any fixed ground structure.

Exception: When pulling lines or conductors that are allowed to "pay-out" from a container or roll off a reel.

(h) External sling load operations shall not be performed if electrical storms in the immediate vicinity make the work unsafe.

(i) Load landing operations shall not be performed when the wind conditions are deemed too unsafe by the pilot or ground crew.

(j) There shall be a minimum clearance of at least 25 feet between any energized power line, rated 50 KV or below, and any part of the rotorcraft load combination. This clearance requirement shall increase at the rate of 1/2 inch for each 1 KV.

Exception: These minimum clearances shall not apply to helicopters or their external loads specifically utilized for power line construction, maintenance, and repair where the work in progress is under the direct supervision of the utility.

(a) All cargo shall be loaded and secured under the direction of the pilot or pilot's designee.

(b) No passenger shall be transported in the helicopter with a sling load and no person shall be transported as an external or sling load, except in an emergency.

Exception: Unless authorized by the F.A.A.

(c) Explosives and other "dangerous materials" shall not be transported except as authorized by F.A.A.

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