

**WAC 296-32-24034 Helicopters used for lifting loads.** This section sets forth the minimum requirements for individuals working with helicopters used as a method for the installation, replacement, and/or removal of antennas and antenna supporting structures.

(1) Helicopters and helicopter cranes used for external load lifting during construction, maintenance and demolition activities must comply with any and all applicable regulations of the Federal Aviation Administration (FAA) Part 133 for helicopter external sling load operations.

(2) Operator/pilot responsibilities. The helicopter operator/pilot must be responsible for their machine and the operations of their equipment.

(3) FAA flight plan. All helicopter external load lifting must be reviewed by the FAA to determine if an FAA Congested Area Flight Plan must be applied for. If a plan is required, it must be filed and approved by the FAA prior to the day of the lift.

(4) Loose gear, equipment and objects. Every practical precaution must be taken to provide for the protection of the employees from flying objects in the rotor downwash. All loose gear, equipment and materials within one hundred feet of the load lifting area and setting the load, and all other areas susceptible to rotor downwash must be secured or removed.

(5) Operational parameters.

(a) The aircraft owner/operator/pilot(s) must be responsible for the helicopter load lifting operations. The weight of an external load must not exceed the manufacturer's rating for the specific aircraft being used. The helicopter operator/pilot must be responsible for size, weight and manner in which loads are connected to the helicopter. If, for any reason, the helicopter operator/pilot believes the lift cannot be made safely, the lift must not be made.

(b) The helicopter operator/pilot must be familiar with the following:

- (i) Load capacities at altitudes and air densities;
- (ii) Hover capacities and limits;
- (iii) Emergency operation and release of electricity operated cargo hooks;
- (iv) Emergency jettison of external sling load;
- (v) Static discharge of external sling load; and
- (vi) Rotor downwash hazards during external sling load operations.

(6) Prejob planning. The use of a helicopter for lifting loads requires careful planning. The work must be organized around the aircraft and the factors that govern its operation such as load limitations, surrounding terrain and structures, and weather conditions. This requires the participation and cooperation of everyone involved. Planning includes, but is not limited to:

- (a) Locate and plan the staging area;
- (b) Provide for fire watch and spills;
- (c) Prepare flight plans;
- (d) Divide the job into lifting zones;
- (e) Plan the load lifting sequence;
- (f) Do alternate day planning.

(7) Helicopter on board hoists. Helicopters or helicopter cranes equipped with on board hoists or winches must not be allowed to be attached or connected to any fixed structure on the ground at any time.

(8) Signaling systems. Signal systems between aircrew and ground personnel must be understood and checked in advance of hoisting the load. This applies to either radio or hand signal systems.

(9) Helicopter refueling. Due to the load lifting abilities and capacities of individual models of aircraft flight with low fuel levels is common. It may become necessary to refuel the helicopter at the designated staging/lift area. Care must be given to ensure the aircraft is grounded per the manufacturer's recommendation during all refueling activities.

(10) Daily preflight briefing. Prior to each day's operation a job hazard assessment must be conducted. This assessment must set forth the plan of operation for all individuals involved in the helicopter external sling load lift. The preflight briefing must include, but not be limited to, the following:

- (a) Weather forecast and visibility for the day of the lift(s);
- (b) Confirmation of flight path;
- (c) Load lifting sequence;
- (d) Individual load weights;
- (e) Wind speed and direction monitoring;
- (f) Ground crew responsibilities;
- (g) Load receiving crew's responsibilities;
- (h) Pilot's responsibilities;
- (i) Communications/signaling;
- (j) Aircraft fuel loading and refueling;
- (k) Emergency plan for load jettison and landing.

(11) Lifting plan.

(a) The lifting plan must at a minimum cover:

- (i) Load identification;
- (ii) Lifting sequence; and
- (iii) Load orientation marks or tags.

(b) Loads that do not require upending must be oriented in the same direction in the staging area as the laydown area. You must:

- (i) Plan the layout of the staging area to avoid any light or unstable material that may blow around; and
- (ii) Plan the lifting and flight path to avoid flying over employees and any material still being installed or not yet secure in the laydown area.

(12) Job hazard analysis/risk assessment. During the job hazard assessment, at a minimum, identify, assess, and eliminate or provide protection against risks posed by:

- (a) Power lines;
- (b) Cranes in the area;
- (c) Structures, roof and structure profiles;
- (d) Loose, unsecured material in staging or roof landing area;
- (e) Temporary, unsecured structures in staging or landing area;
- (f) Roof openings and roof access - Cover both to prevent building pressurization and to eliminate fall hazards;
- (g) Unprotected roof edges;
- (h) Pinch, crush, and similar danger points in the load/lift/land sequence;

- (i) Weather conditions;
- (j) Public safety.

(13) Rigging slings and inspection.

(a) Rigging slings for suspended external loads must consist of steel IWRC type slings at all direct connection points to the load being lifted.

(b) Synthetic slings may only be used in the intermediate length of the rigging between the direct steel sling and the cargo hook connection.

(c) The connection between the slings and the helicopter cargo hook must be a single steel rigging ring of either round or oval shape and must be of compatible shape and size to ensure immediate connection and release when the connection between the cargo hook and the ring is terminated by deliberate action of the pilot.

(d) All rigging components and assemblies must have documented inspections each day before use.

(14) Tag lines.

(a) Tag lines must be used on all external sling loads.

(b) All tag lines must be equipped at the end with a weight of sufficient size to ensure that the line will not be induced into the main rotor or tail rotor under any operating condition.

(c) Hand spliced synthetic rope connections are not allowed in any helicopter external load operation.

(d) Tag line length must be kept shorter than the load line length to ensure the lines cannot be blown into the main rotors.

(15) Remotely operated cargo hooks.

(a) All cargo hooks must have the electrical activating device so designed and installed as to prevent inadvertent operation.

(b) In addition, these cargo hooks must be equipped with an emergency mechanical control for releasing the load.

(c) The hooks must be tested prior to each day's operation to determine that the release functions properly, both electrically and mechanically.

(16) Personal protective equipment (PPE).

(a) Personal protective equipment for employees receiving the load must consist of approved eye protection and head protection.

(b) Head protection must have chin straps to prevent inadvertent loss of head protection during operations.

(c) Loose-fitting clothing likely to flap in the downwash, and thus be snagged on hoist line, must not be worn.

(17) Housekeeping. Good housekeeping must be maintained in all helicopter loading and unloading areas.

(18) Hooking and unhooking loads.

(a) When employees are required to perform work under a hovering helicopter, a safe means of access and egress must be provided for employees to reach the hoist line hook and engage or disengage cargo slings.

(b) Employees must not perform work under hovering craft except when necessary to hook, unhook or secure loads.

**Note:** Load shape, orientation, and packaging. Load shapes can affect in-flight handling. Loads can be marked with their required orientation by using north or other marks to match mark to laydown locations. Remove loose sheeting, tarps, or other wrappings. Loose material can blow around, injure employees, and damage the aircraft if drawn into engine intakes or rotor blades.

(19) Static charge/discharge. The suspended load must be dissipated with an insulated grounding device before any construction personnel touch the suspended load, or protective rubber gloves must be worn by all ground personnel touching the suspended load.

**Notes:** 1. A static charge can develop on any suspended external sling load. The amount of static electricity that may be present prior to discharging is directly related to the temperature, humidity, altitude and time the load is suspended and/or flown during the external sling load operation.  
2. The load may be equipped with a weighted grounding conductor slung below the load to discharge the static current if the pilot approves this method of discharge.

(20) Approach distance. No unauthorized person shall be allowed to approach within one hundred feet of the helicopter when the rotor blades are turning.

(21) Approaching a running helicopter.

(a) When approaching or exiting a helicopter with blades rotating, all employees must remain in full position with arms and hands kept low.

(b) Employees must avoid the area from the cockpit or cabin rearward unless authorized by the helicopter operator to work there.

(c) Personnel must not approach the area of the tail rotor at any time.

(22) Communications.

(a) There must be constant reliable communication between the pilot, competent rigger and a designated employee of the ground crew who acts as a signalman during the period of loading and unloading.

(b) The signalman must be distinctly recognizable from other ground personnel.

(23) Personnel training. The personnel performing the work must be trained in advance of any helicopter external sling load operation in all facets of the operation. This training can be accomplished in the prelift briefing. Employees must be made aware of the following:

(a) Static and discharge procedures;

(b) Wind/downwash characteristics;

(c) Noise;

(d) Fall protection to release hook;

(e) Tagline parameters;

(f) Flying objects due to wind;

(g) PPE requirements;

(h) Rigging connections;

(i) Communication/signaling;

(j) Emergency planning.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 20-20-109, § 296-32-24034, filed 10/6/20, effective 11/6/20. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060, and chapter 49.17 RCW. WSR 17-20-069, § 296-32-24034, filed 10/2/17, effective 1/1/18.]