

# Camera Cranes

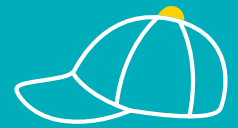
## ACTSAFE SAFETY BULLETIN #25

This bulletin provides guidelines for safely assembling, using, and working around telescopic camera cranes, fixed-arm camera cranes, and jib arms for cameras.

When camera cranes are used with vehicles or equipment such as insert cars, process trailers, watercraft, or mobile bases refer to [Safety Bulletin #8 — Guidelines for Traditional Camera Cars and Process Trailers](#). It's also important to maintain safe limits of approach for overhead wires. See [Safety Bulletin #25A — Power Line Distance Requirements](#).

### Overhead visibility

Three-quarters of crane injuries are from people hitting their heads, mostly people wearing hats such as ball caps that limit overhead visibility.



## CONTROL MEASURES

Consider the following control measures to protect performers and crew while a camera crane is in use.

Performers (including background performers) and crew should be aware of the:

- Crane's operating area
- Points of impact (areas under the crane where you could strike your head)
- Crane's range of motion
- Tracks for camera cranes or dollies (potential tripping hazards)

If the camera crane is equipped with manual or hydraulic levelling legs, follow the manufacturer's instructions regarding their use. To prevent the unit from tipping over, make sure there is proper weight distribution and that the ground is stable.

When operating a camera crane, qualified workers should ensure that there is adequate clearance

for operation. Consider the presence of potential obstructions or hazards, such as power lines, helicopter rotors, vehicles, trees, fire sprinkler heads, or other hard obstacles.

### Other control measures

- Seat belts are to be provided on all camera cranes where passengers are required for operation. Seat belts must be maintained in good condition and used by all passengers.
- Don't step on or off a camera crane, or add or remove payloads, until you receive approval from the crane technician. Stepping off a balanced camera crane without providing a counterbalance can cause the arm to elevate rapidly and result in serious injury.
- Equipment must not be attached to or altered on the camera crane without the authorization of the crane technician.

### Telescopic camera cranes

Telescopic camera cranes (e.g., Technocranes) operate differently than fixed-arm camera cranes or jib arms. Telescopic camera cranes:

- Are used for remote camera heads only
- Can extend at 2.6 m (8.5 ft.) per second
- Have two balancing systems, one fixed and one that moves
- Have sensitive electronic components, some of which are digital and need a separate power source



# Camera Cranes

## ACTSAFE SAFETY BULLETIN #25

### Wind and crane stability

If a crane is extended to its full reach and the arm is directed upward, gusts of wind at open-air locations can threaten the crane's stability. Manufacturer guidelines recommend not working in winds stronger than force 6 on the Beaufort scale (max. 49 km/h or 31 mph). Make sure you're aware of the crane's position in relation to the direction of the wind, including when using a wind machine or filming on the water.

- Performers and crew should never pass under a camera crane unless authorized by the crane technician.
- Personal protective equipment must be worn, where needed. For example, technicians

loading or unloading weights from the crane should wear CSA-approved protective footwear and proper gloves for all weather. Workers should have rain gear for weather and SPF.

- The camera crane's operating area should be identified or cordoned off with tape, cones, or some other indicator. Performers and crew should only enter the operating area after the shot is established and with approval from the 1<sup>st</sup> AD and crane technician.
- Crew members and crane technicians should not use distracting electronic devices while operating a crane.
- When on a watercraft or mobile dock, make sure the base of the crane is secured.
- Make sure appropriate track stops such as sand bags are in place.

## PRODUCTION REQUIREMENTS

Each camera crane should include an assembly and usage manual supplied by the manufacturer or vendor. The manual should include assembly instructions, maximum payload and maximum gross weight in all configurations, safety precautions, and maintenance procedures. Where different, the manufacturer's or vendor's instructions will supersede this safety bulletin. Read and follow all manufacturer's placards on the equipment.

### Assembly and operation

Only workers trained in the safe use of each specific camera crane (i.e., crane technicians) should assemble or operate these devices.

The camera crane base should be levelled or on a platform or track system capable of supporting the intended load. Consider the weight of all workers, equipment, and the camera crane. Mobile bases with cranes make moving a heavy piece around easier, which will help to keep clear of obstacles and people while the crane is moving. Be advised by the mobile base crane technician driver.

The payload on the boom arm should not exceed that which can be balanced by the counterweight system supplied with the equipment. Don't use additional counterweights other than the ones supplied by the vendor. Consult the manufacturer or vendor regarding all extension configurations that are not specified in the operating manual.

During lunch, the crane should be properly cordoned off in a safe position with cones in high-traffic areas. It should also be secured, coned off, and tarped overnight, when possible.

### Inspections and maintenance

Camera cranes should be inspected following a protocol supplied by the manufacturer or vendor. Inspections can be done by qualified workers (e.g., key grips, 2<sup>nd</sup> grips, or dolly grips). The crane technician should do daily inspections.

If components are missing, damaged, or not working properly, remove the equipment from the set. Missing or damaged components are to be replaced or repaired in accordance with the



# Camera Cranes

## ACTSAFE SAFETY BULLETIN #25



manufacturer's or vendor's procedures before returning the equipment to the set.

without damaging the location. Be prepared with supplies such as plywood to protect the ground after a rainfall.

### Weather

Be aware of changing weather and what is needed for the crane to roll from one location to another

## SAFETY MEETINGS

Safety talks must be held with all crew and performers (including BG), as well as the crane technician, to discuss operations and precautions. These discussions may include but should not be limited to the following topics:

- Possible risks to workers involved, including being struck or crushed, or even hitting your head on the bottom of the crane.
- Overview of all obstacles, equipment, and locations that may present a hazard, as well as control measures to protect workers and equipment. Consider weather, including the direction and force of wind.

- Locations of boundaries and intended crane operating areas.
- The importance of keeping the camera crane's operating area clear of obstacles.
- Communications, including chain of command and emergency procedures.

It may be necessary to conduct additional safety meetings if there are changes to the original intended operation of the camera crane.

## RELATED RESOURCES

- [#25A — Powerline Safety Distance Requirements](#) (Actsafesafetybulletin)
- [Planning Work Around High-Voltage Equipment? "Plan for 10" \(WorkSafeBC webpage\)](#)

### Actsafesafety Association

Actsafesafety ([www.actsafesafety.ca](http://www.actsafesafety.ca)) is a not-for-profit health and safety association supporting British Columbia's arts and entertainment industries. Actsafesafety provides resources and training to employers, workers, and supervisors. We are always here to provide information relevant to best practices around health and safety in the arts and entertainment industries in B.C.

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