



SHAPE SAFETY BULLETIN # 11

(Safety & Health In Arts Production & Entertainment)

FIXED-WING AIRCRAFT

ATTACH ADDENDUM "A" - EXTERNAL LOAD GUIDELINES TO THIS BULLETIN

Fixed wing aircraft (*i.e.*, aircraft, gliders, ultra lights) flying may be adversely affected by changing natural conditions such as wind, temperature and time of day. Man made conditions such as weight, externally mounted equipment and the discharge of pyrotechnics and/or smoke can also affect the pilot's ability to fly safely. Special precautions should be taken to ensure safety when working around aircraft that are operating in close proximity to camera, cast and crew, including taxiing, take off and landing.

1. All **Pilots in Command** shall possess an authorization pursuant to the appropriate section of the Canadian Aviation Regulations (CARs). Such an authorization is not always required, depending on location/intended shoot. Contact Transport Canada General Aviation if unsure whether an authorization is required. Sixty (60) days notice is recommended, if possible.
2. The **Pilot in Command** is at all times the final authority over **his/her airplane** and shall be in command over his/her **flight operations and/or related activities**.
3. Communications: **The Aerial Coordinator and/or Pilot in Command** will coordinate with the designated production representative and implement a plan for communications between the participants in the air and on the ground.

The plan will incorporate the following:

- a. Designated ground contact personnel.
 - b. Air to ground radios, VHF or FM.
 - c. Assignment of discreet frequencies (channels).
 - d. Visual signals (flags, specified hand signals, light or flare) shall be used to halt filming in the event of lost communications or inability to utilize radios.
 - e. Abort signals, audible and visual to halt filming in the event of unforeseen circumstances or safety hazards.
 - f. **NOTE:** Hand signals used to communicate between air and ground crews must be understood by the workers exposed to identified hazards. The designated signaller must be clearly identifiable to the pilot by means of high visibility apparel and position.
4. **NECESSARY CREW AND PERSONS AUTHORIZED**
- a. Flight operations closer than **150 metres (500 feet)** to persons will include only those persons consenting to be in close proximity to the aircraft and who are directly involved and necessary for the filming.

The **Aerial Coordinator and/or Pilot in Command** and the designated production

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and security personnel will generally maintain an area perimeter to ensure that no unauthorized persons come within **150 metres (500 feet)** of the flight operations. See Canadian Aviation Regulations Standards (CARs) 623.07 for special considerations.

5. A preplanned stunt or special effect sequence will not be changed in any way without the authorization of the **Aerial Coordinator and/or Pilot in Command**.
6. At the start of each day's filming the **Aerial Coordinator and/or Pilot in Command** and the designated production representative will conduct a briefing / **SAFETY MEETING** for the production staff of those persons necessary for filming, including emergency, safety and security personnel.

Note: A subsequent briefing/SAFETY MEETING may also be required as necessary for an intended action.

Briefings should be carried out in an area as free of noise and other distractions as possible and attendance should be limited to flight crews, flight crew support staff, parachutists, ground performers (e.g., pyrotechnic teams, announcers, etc.) and key event personnel. Key event personnel are the persons responsible for the air, ground, safety and emergency operations for the event. Each participant's attendance at the briefing shall be verified by roll call or otherwise and a record retained for submission to Transport Canada Aviation, if requested. Performers who are not briefed, shall not be permitted to participate in the flight program on that day.

All briefings/safety meetings shall include the following:

- a. Pertinent items and the special provisions of the Aerial Coordinator and/or Pilot in Command(s) Motion Picture and Television Operations Manual and accompanying Waiver along with any additional provisions issued by Transport Canada and, as appropriate, any provisions issued by a FAA Flight Standards District Office.
 - b. A weather briefing by a Flight Service Station Specialist or an experienced pilot covering aspects of the weather that may affect the shoot.
 - c. Possible risk to personnel that are involved.
 - d. Safeguards to personnel and equipment.
 - e. Communications, including a discussion of the method(s) of coordinating air traffic and suspending the shoot or recalling a performer by both radio and visual signals.
 - f. Emergency procedures, including firefighting or other emergency services equipment available.
 - g. Location of boundaries.
 - h. Local governmental limitations or restrictions, if any.
5. The Aerial Coordinator and/or Pilot in Command shall designate one person as the Ground safety contact with no other responsibilities. This individual should attend any relevant safety meetings for production staff.
 6. If there is a question as to safety of any aerial filming sequence involving low, over-the-camera shots, a briefing/Safety Meeting shall be held between the Aerial

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Contact SHAPE: 280 - 1385 West 8th Ave, Vancouver, BC V6H 3V9

Tel: 604-733-4682 Fax: 604-733-4692 Email: info@shape.bc.ca Website: www.shape.bc.ca



Coordinator and/or Pilot in Command and concerned persons as to whether the use of a locked-off camera is necessary.

7. Aircraft engines shall not be started and the aircraft shall not be taxied in spectator, cast or crew areas unless appropriate measures are taken to preclude creating a hazard to spectators, cast or crew.
8. Cast, crew and equipment shall be protected from debris thrown back by airplanes taxiing out or taking off.
9. If an aircraft is being filmed with the engine running, adequate safety precautions shall be taken in connection with activity in front of the propeller, which includes designated ground personnel.
10. No smoking is permitted within 33 metres (100 feet) of the aircraft or fuel support truck.
11. Aircraft structures can be damaged easily while on the ground. Never push, handle, sit on or in, or lay any objects of any kind on an aircraft without the pilot's permission.
12. If a foreign object falls into or against an aircraft, report it immediately to the **Aerial Coordinator and/or Pilot in Command**.
13. Each end of an operational runway or landing area should be cleared during take-off and landing and appropriate safety precautions should be taken as to the placement of camera equipment when filming the take-off or landing.
14. Low level acrobatic maneuvers shall be conducted in a direction, which will most nearly parallel the boundaries of the designated crew and equipment area or in a direction away from such areas.
15. When working on location or utilizing Department of Defense aircraft, local agencies, regional police, fire, or park department regulations or military guidelines may vary from this bulletin. The more stringent guidelines will always be in effect. Additionally, permission may be required for landing or refueling operations.
16. The production company must notify all cast and crewmembers and the front of the studio call sheet shall contain a statement to the effect that:

"An aircraft is being used and will be flown in close proximity to crew and equipment. Anyone objecting will notify the production manager or 1st AD prior to any filming."
17. Except where necessary for takeoff or landing, Transport Canada prohibits the operation of an aircraft below the following altitudes:
 - a. Over Congested Areas
Over any congested area of a city, town or settlement, or over any open air assembly of persons, an altitude of 300 metres (1,000 feet) above the highest

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obstacle within a horizontal radius of 600 metres (2,000 feet) of the aircraft.

b. Over other than Congested Areas

An altitude of 150 metres (500 feet) above the surface, except over open water or sparsely populated areas. In that case, the aircraft may not be operated closer than 150 metres (500 feet) to any person, vessel, vehicle or structure.

A COPY OF THIS BULLETIN SHALL BE ATTACHED TO THE CALL SHEET ON DAYS THE AIRCRAFT IS BEING UTILIZED

