



SHAPE SAFETY BULLETIN #29

(Safety & Health In Arts Production & Entertainment)

HOT AIR BALLOONS

EXTERNAL LOAD GUIDELINES ARE ATTACHED TO THIS BULLETIN AS **ADDENDUM A**

The flying accuracy of a Hot Air Balloon may be adversely affected by changing natural conditions such as wind, air density, **altitude/temperature**, humidity and time of day. Special precautions should be taken to ensure safety when working in any extreme temperatures or terrain, *e.g.*, mountains and deserts. Manmade conditions such as weight, weight distribution and/or the discharge of pyrotechnics in close proximity can also affect the balloon's ability to fly.

1. **NOTE: Any Balloon that is inflated and standing must have a Transport Canada certified pilot.** A qualified Pilot shall be utilized to pilot the balloon or dirigible. See Canadian Aviation Regulations Standards (CARs) 623.21 for specific pilot qualifications.
2. The production company or sponsoring agency **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. 60 days notice is recommended, if possible.
3. The **Pilot in Command** is at all times the final authority over his/her balloon and **shall** be in command over all **flight operations and/or related activities**. The **Pilot in Command shall** have the authority to abort any operation. Abort signals **shall be specified** ahead of time.
4. 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, or light) shall be used to halt filming in the event of lost communications or inability to utilize radios. (**Note: flares are not to be used in or around a balloon**).
 - e. Abort signals, audible and visual to halt filming in the event of unforeseen circumstances or safety hazards.
5. Prepare plot plans and graphics to locate the intended landing area, intended flight paths, and designated emergency landing sites. Indicate the location and types of special effects.

Safety Bulletins Are Recommended Guidelines Only; Consult All Applicable Rules and Regulations



6. A briefing/ SAFETY MEETING should be held for the production staff and other 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 items (see Canadian Aviation Regulation (CAR) 623.22):

- a. A general overview of the flight (expected length of the flight, different phases of the flight from inflation to landing, etc.).
 - b. Where passengers are to position themselves during inflation.
 - c. Emergency procedures and the location of emergency equipment (fire extinguisher, drop line, first aid kit, etc.).
 - d. The location of boundaries and rules pertaining to smoking.
 - e. The dangers relating to the fan.
 - f. The dangers relating to the hot phase of the balloon inflation.
 - g. The procedures to be followed for entering and exiting the basket.
 - h. Where the passengers are to position themselves in the basket.
 - i. The procedures to be followed during landing (handholds, bracing, not to leave basket until directed to do so, etc.).
 - j. The procedures to be followed during the deflation of the balloon.
 - k. Local governmental limitations or restrictions, if any.
 - l. Pertinent items and special provisions of the Aerial Coordinator and/or Pilot in Command along with any additional provisions issued by Transport Canada.
7. The **Aerial Coordinator and/or Pilot in Command shall** designate one person as the Ground safety contact with no other responsibilities. The Balloon Crew Chief may be designated as the ground safety contact around the balloon. This individual should attend any relevant safety meetings for production staff.
8. A preplanned stunt and/or special effect sequence, if any, will not be changed in any way once the Balloon has been launched unless there has been sufficient

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

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- communication between the parties involved and there will be no adverse impact on safety. 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 Coordinator and/or Pilot in Command** and concerned persons as to whether the use of a locked-off camera is necessary.
9. Allow only personnel essential to the filming of the balloon to be in the area. All other personnel shall remain a safe distance from the balloon.
 10. No smoking is allowed within 33 metres (100 feet) of the propane storage area.
 11. There **shall** be a designated and approved area for the storage of propane fuel tanks (usually with or at the support vehicle location).
 12. Check on predicted weather conditions in the areas of the launch site, flight paths, and landing site. Provide as much advance notice as possible to the **Aerial Coordinator and/or Pilot in Command** regarding any weather problems such as high winds, rain or lightning. Sudden changes in any of the above may require that the flight be delayed or canceled.
 13. **Balloon support equipment is very important as parts are easily damaged while on the ground. Do not step on any part of the balloon or tether ropes.**
 14. Keep all sharp objects, heat sources or open flames and non-essential equipment a safe distance from the balloon.
 15. If a foreign object(s) falls into, on or against any part of the Balloon or rigging, report it immediately to the **Pilot in Command and/or Aerial Coordinator**.
 16. A chase vehicle shall be assigned with no other duty than to support the balloon crew.
 17. Before any stunt or special effects sequence is to be performed, all persons involved shall be thoroughly briefed as to any potential hazards and safety questions prior to the filming.
 18. If an emergency occurs, **DO NOT TOUCH** any part of the balloon. A designated balloon ground crew member will take charge and coordinate rescue operations. Immediately call 911 or the designated emergency number for the area.
 19. If you are unsure about any part of the balloon operation, ask the **Pilot in Command and/or Aerial Coordinator**.
 20. 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:

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"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."

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

For further information, refer to the Government of Canada Transport, Infrastructure and Communities Portfolio *General Operating and Flight Rules* information website:

<http://www.tc.gc.ca/CivilAviation/Regserv/Affairs/cars/PART6/Standards/623d2.htm>

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