

# Interagency Aviation Safety Alert



No. IA 07-01

April 6, 2007

Page 1 of 2

**Subject:** SPH-5 Flight Helmets

**Area of Concern:** Aviation Operations

**Distribution:** All Fire and Aviation Personnel

**Discussion:** The most common flight helmet currently in use by Department of the Interior (DOI), U.S. Forest Service (USFS), and vendor personnel is the Gentex SPH-5.

Over the past several years, personnel at the BLM Ramp Services, Boise, who inspect and repair many of our helmets, have reported that they frequently find cracks in SPH-5 shells just above the forward edge of the earcups. It's not uncommon for **6 out of 10** SPH-5s sent in from the field to be condemned because of cracks in this area.



**It's important to understand that once the shell is cracked the helmet is unserviceable and must be replaced. It cannot be repaired. At a cost of almost \$700 for each SPH-5 flight helmet this is both a safety and a financial issue.**

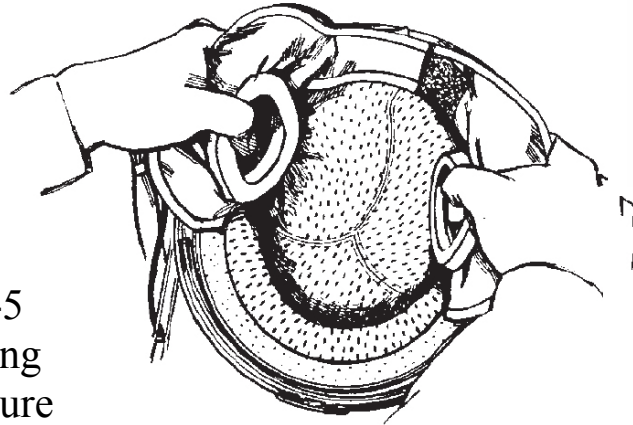
One likely cause of these cracks may be users who use excessive force when they “don” (put on) or “doff” (take off) their helmets. Whether you pull the shell a little too hard when you are donning or doffing the helmet, or whether you compress the shell a little too much in order to get a snug fit once the helmet is on your head, you are introducing stressors that can contribute to the cracking of the shell.

The SPH-5 User's Manual explains the proper donning and doffing technique, and cautions the user against spreading the helmet excessively.

## CAUTION

Spread the helmet slightly – just enough to allow ease of donning. Excessive spreading may damage the helmet.

### SPH-5 Donning Procedure



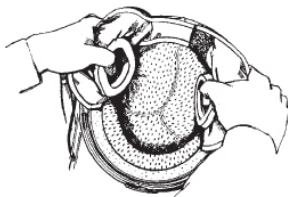
### SPH-5 Doffing Procedure

**IMPORTANT !!**  
Instead of pulling or pushing on the shell, compress the earpiece by firmly squeezing the earpiece with your thumbs.

#### CAUTION

Spread the helmet slightly – just enough to allow ease of donning. Excessive spreading may damage the helmet.

- Grip the retention assembly below the earcups as shown in Figure 3, View A.
- Spread the sides of the helmet slightly and position the front edge firmly against the forehead as shown in Figure 3, View B.
- Roll the helmet back and down onto the head. Press the helmet firmly downward with both hands to ensure that the helmet is properly seated on the head and the ears are surrounded by the earcups. (The earcups can be rotated for optimum fit.)
- Check the distance between the eyebrows and the edge of the helmet shell; it should be approximately (but no more than)  $\frac{3}{4}$  for optimum field of view.



A



B

- Have the crewmember doff the helmet as follows:

#### CAUTION

Spread the helmet slightly – just enough to allow ease of doffing. Excessive spreading may damage the helmet.

- Hook the thumbs in the earcups and spread the helmet at the earcup area.
- Roll the helmet upward and rearward as shown in Figure 8.



By using your thumbs to compress the foam ear pad and earcup into the helmet-mounted cross straps (the elastic straps attached to the shell) you should be able to don or doff your helmet while minimizing the stress to the helmet shell.

Following the manufacturer's instructions, the reminders in this Interagency Aviation Safety Alert, and the tips and techniques in the DOI Flight Helmet Users Guide (<http://amd.nbc.gov/safety/library/helmetguide.pdf>) will help reduce the wear and tear on your helmet and ensure that it is in the best possible condition to protect you if the need arises.

*/s/ Robert Galloway*

Robert Galloway  
Aviation Safety Manager

*/s/ Ron Hanks*

Ron Hanks  
National Aviation Safety  
and Training Manager