

Federal Aviation Agency



Cancelled

AC NO: AC 00-21
GENERAL
EFFECTIVE : 10/5/66

SUBJECT : SHOULDER HARNESS

1. **PURPOSE.** This advisory circular sets forth information to the aviation community regarding the installation and use of effective shoulder harnesses by pilots in general aviation aircraft.
2. **REFERENCE.** Report AM 66-33, Office of Aviation Medicine, Federal Aviation Agency, September 1966-Recommendations for Restraint Installation in General Aviation Aircraft - by Joseph W. Young.
3. **DISCUSSION.**
 - a. Federal Aviation Agency analysis of general aviation aircraft accidents shows that injuries or deaths could have been prevented in some cases if appropriate shoulder harnesses or other suitable restraint systems had been installed and used by pilots when operating aircraft. Most operators of high-speed aircraft agree that an effective upper-body restraint prevents, in many instances, head and upper-body injuries in rapid decelerations. Tests have shown that in the absence of upper-torso restraints, serious injuries can occur in some aircraft in rapid decelerations from speeds as low as 15 m.p.h.
 - b. The Federal Aviation Agency has also published a report (AM 65-14) which gives design information for manufacturers of shoulder harnesses, and shows the proper positioning of the shoulder harness on the wearer. Copies of this publication entitled "The Angle of Shoulder Slope in Normal Males as a Factor in Shoulder Harness Design," as well as the reference report is available to the public. These reports may be obtained free of charge from the Federal Air Surgeon, AM-1, Federal Aviation Agency, Washington, D. C. 20553.

4. CONCLUSIONS. All general aviation owners and operators are encouraged to equip their aircraft with effective shoulder harness. The shoulder harness should be in addition to the required seat belts and worn by all pilots while the aircraft is being operated. The Federal Aviation Agency is currently engaged in the development of shoulder harness installation standards for small general aviation aircraft. FAA inspectors will be prepared to provide guidance concerning the installations of this nature.

Acting
W. E. Ragen
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