



<b>AEROSPACE RECOMMENDED PRACTICE</b>	<b>ARP4771™</b>	<b>REV. A</b>
	Issued	2008-08
	Cancelled	2023-06
Superseded by ARP1384		
Recommended Brace Positions		

RATIONALE

This document is cancelled and the information contained therein is now incorporated into ARP1384.

CANCELLATION NOTICE

This technical report has been declared "CANCELLED" as of June 2023 and has been superseded by ARP1384. By this action, this document will remain listed in the respective index, if applicable. Cancelled technical reports are available from SAE.

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## 1. SCOPE

This document contains information that can be used by the air transportation industry to provide passengers with consistent "Brace for Impact" positions in passenger safety information and briefings. This information is intended to reduce the potential confusion passengers may experience upon being presented with different "Brace for Impact" positions as they travel on different aircraft or on different carriers. This document does not address child restraint or situations where adult passengers are seated behind fixed tables.

### 1.1 Mandating and Recommendation Phrases

"Shall": The word "shall" indicates a mandatory criterion.

"Should": The word "should" indicates a criterion for which an alternative, including non compliance, may be applied if it is documented and justified.

## 2. REFERENCES

### 2.1 Applicable Documents

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

#### 2.1.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), [www.sae.org](http://www.sae.org).

ARP1384 Passenger Safety Information Briefing Cards and Video Briefings

AS5276/1 Performance Standard for Child Restraint Systems in Transport Category Airplanes

### 2.1.2 U.S. Government Publications

Available from Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402-9325, <http://assist.daps.dla.mil/quicksearch/>.

United States Code of Federal Regulations, Title 14, Parts 91/121/125/135

FAA Advisory Circular No: 121-24, Passenger Safety Information Briefing and Briefing Cards

### 2.1.3 Canadian Commercial and Business Aviation Advisory Circulars (CBAAC)

Available from Transport Canada, <http://www.tc.gc.ca/CivilAviation/commerce/CabinSafety/BracePositions.htm>

## 2.2 Related Publication

The following publication is provided for information purposes only and is not a required part of this SAE Aerospace Technical Report.

Richard Chandler, Brace For Impact Positions, Proceedings of the Fifth Annual International Aircraft Cabin Safety Symposium, Cosponsored by the University of Southern California, the FAA (Western Pacific Region) and the Southern California Safety Institute, February 1988

## 3. CONSIDERATIONS AND RECOMMENDATIONS

### 3.1 Seat Configuration

Most passenger seats are situated behind another passenger seat, a vertical bulkhead, or a passageway. Depending upon interior configuration of the aircraft and the size of the passenger, the passenger may or may not be able to reach the surface in front. This requires that information be conveyed on at least two brace positions for passengers in forward facing seats; one for conditions where there is a seat or other cabin furnishing within reach in front of the passenger, and one where there is no seat or other cabin furnishing within reach in front of the passenger.

Occasionally there are rearward-facing seats on both transport-category aircraft as well as on general aviation aircraft. Further, some general aviation aircraft are equipped with sideward-facing seats that may be occupied on takeoff and landing.

### 3.2 Brace Positions

#### 3.2.1 Forward Facing

Figure 1 provides the important features of the two brace positions for use by adult passengers in forward facing seats. Figure 1 may be used as a guide in preparing safety information media. It need not be copied exactly, but the intent of the illustration (as indicated by the numbered features) should be maintained. These features shall be provided in all passenger safety information materials and briefings (reference ARP1384).

#### 3.2.2 Rearward Facing

The brace position that can provide protection in high-g decelerations would be to have the feet on the floor with the back and the head pressed against the seat back and headrest. This is also seen in Figure 1. These features shall be provided in all passenger safety information materials and briefings (reference ARP1384).

### 3.2.3 Sideward Facing

No consensus has been reached as to the best brace position occupants should assume in side-facing seats. It is not clear whether a lap-belt/upper torso restraint provides more or less protection than simply a lap belt restraint. Therefore, no recommendation as to whether the passenger should be bent over or seated upright in the brace position can be made at this time.

### 3.2.4 Inflatable Restraints

Inflatable restraints may require special actions. If so, they shall be described in all passenger safety information materials and briefings (reference ARP1384).

### 3.3 Child Restraint

No consensus has been reached as to the best brace position for occupants holding children. Children shall be restrained in an approved restraint system (reference AS5276/1).

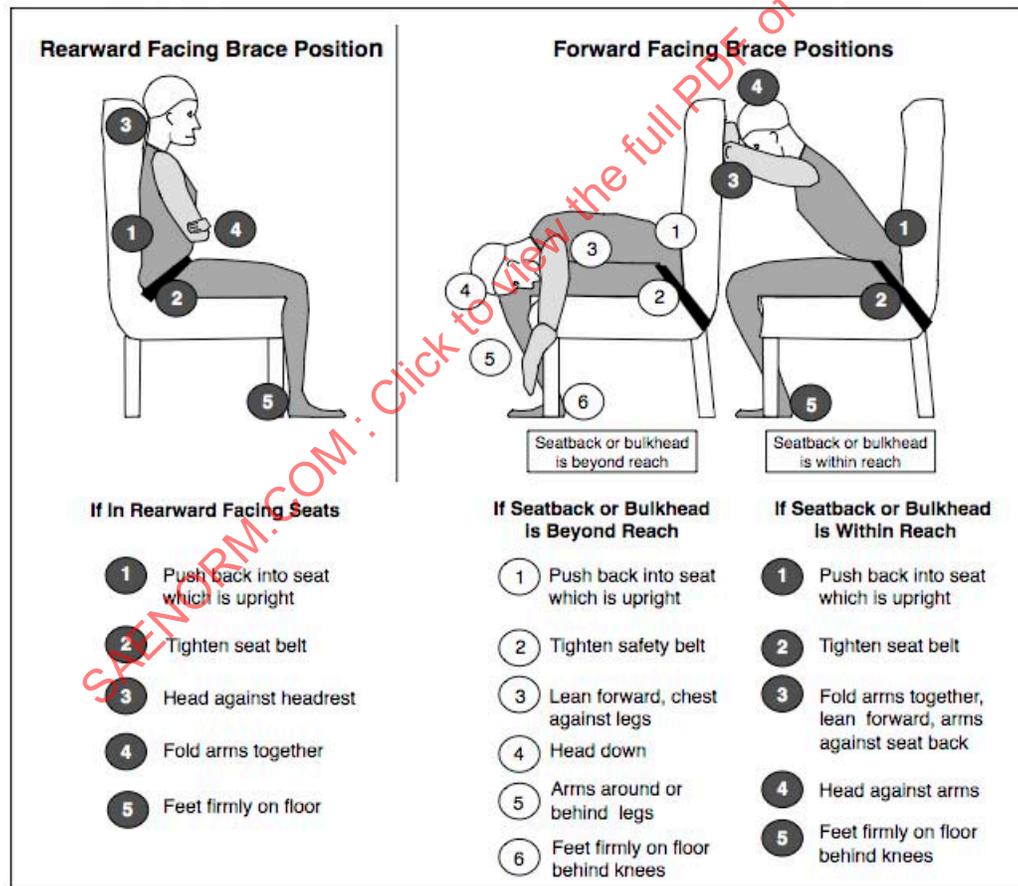


FIGURE 1 - BRACE POSITIONS TO TAKE IN DIFFERENT SEATING LOCATIONS