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SAE J925 OCT84

Minimum Service Access Dimensions for Off-Road Machines

SAE Recommended Practice
Corrected October 1984

Submitted for Recognition as an American National Standard

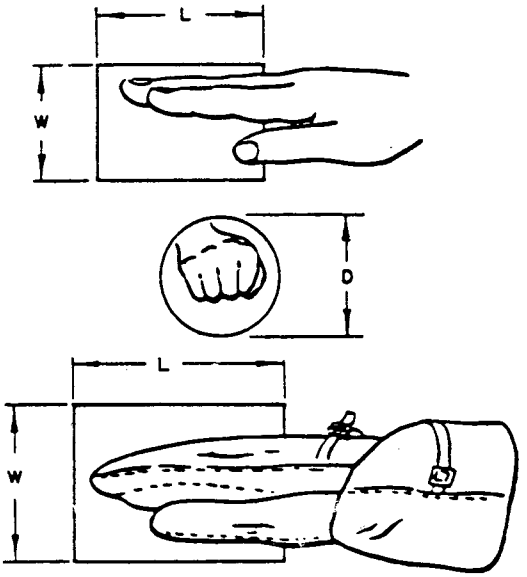
MINIMUM SERVICE ACCESS DIMENSIONS FOR OFF-ROAD MACHINES—SAE J925 OCT84

SAE Recommended Practice

Report of the Construction and Industrial Machinery Technical Committee, approved July 1965, corrected October 1984.

This SAE Recommended Practice is intended to give information to engineers and designers in order that access openings provided in equipment and machinery for purposes of inspection, adjustment, and maintenance be made large enough for efficient performance of the intended function by the man in the field or shop.

The larger openings for access with arctic clothing are based on military arctic clothing. They are intended for military equipment and also equipment used on civilian construction requiring performance in cold environments. Based on available anthropometric data, the recommended openings are the smallest that will accommodate 95% of the people.

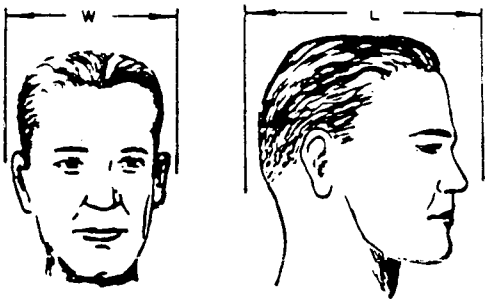


Dimensions in millimeters

Minimum dimensions	Square		Round	Rectangular	
	W	*L*	*D*	*W*	*L*
Hand bare	100	100	100	60	105
With arctic mitten	140	140	140	95	140

NOTE: Optional on all corners, maximum 25 mm radius.

FIG. 1—RECOMMENDED MINIMUM DIMENSIONS FOR HAND ACCESS, 95TH PERCENTILE



Dimensions in millimeters

Minimum dimensions	Square		Round	Rectangular	
	W	*L*	*D*	*W*	*L*
Head bare	230	230	230	165	230
With arctic clothing	255	255	280	230	280
With hat, helmet	305	305	305	255	305

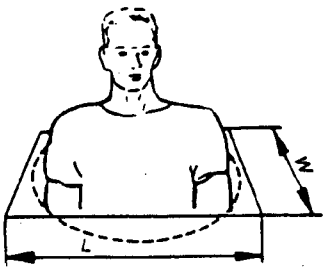
NOTE: Optional on all corners, maximum 25 mm radius.

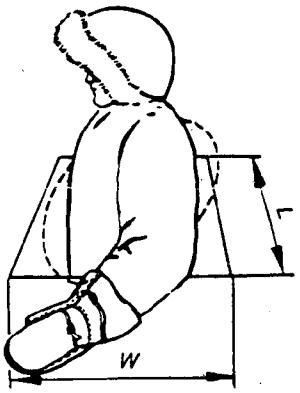
FIG. 2—RECOMMENDED MINIMUM DIMENSIONS FOR HEAD ACCESS, 95TH PERCENTILE

In many cases, larger openings will be mandatory to perform the specific intended operation. In most cases, openings larger than the recommended minimum will be more useful and efficient.

Recommended minimum openings for hand 95th percentile are shown in Fig. 1. Fig. 2 gives recommended minimum openings for head passage 95th percentile and Fig. 3 gives recommended minimum openings for body manhole access 95th percentile. Recommended minimum dimensions for reach access 95th percentile are shown in Figs. 4 and 5.

The dimensions shown are the recommended minimum for limited activity through the opening. Larger openings will be needed in specific instances, depending upon nature of task, size, and weight of parts, etc. They are based on data from: QM Handbook Series, Human Engineering Guide to Equipment Design, SAE tables, and Product Engineering (Human Engineering Reprints).



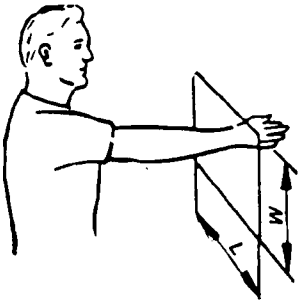


Dimensions in millimeters

Minimum dimensions	Square		Round	Rectangular	
	W	L	D	W	L
Normal clothing	455	455	560	305	560
Arctic clothing	510	510	610	355	610

NOTE: Optional on all corners, maximum 25 mm radius.

FIG. 3—RECOMMENDED MINIMUM DIMENSIONS FOR BODY ACCESS, 95th PERCENTILE

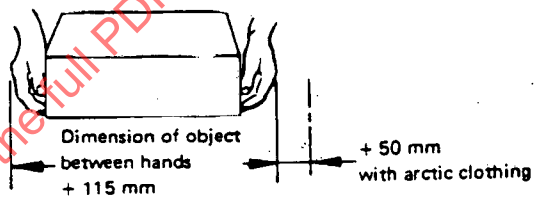


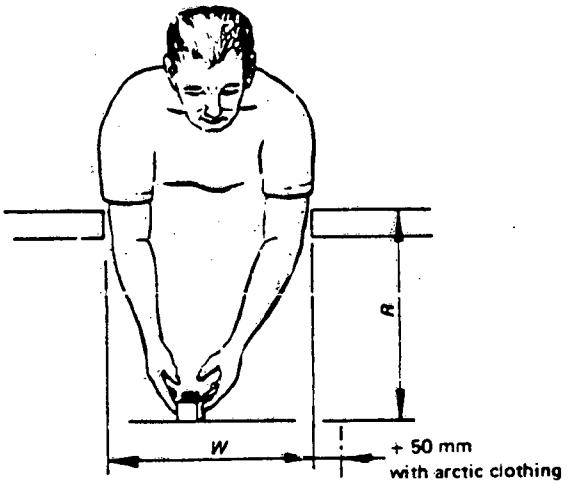
Dimensions in millimeters

Minimum dimensions (one arm)	Rectangular	
	W	L
Arm bare	150	205
With arctic clothing	205	255

NOTE: Optional on all corners, maximum 25 mm radius.

FIG. 4—RECOMMENDED MINIMUM DIMENSIONS FOR ARM REACH ACCESS, 95TH PERCENTILE





Dimensions in millimeters

Minimum dimensions (two hands)	R	W
	Required reach	Minimum width
Normal clothing	R	$\frac{3}{4}R$
Arctic clothing	R	$\frac{3}{4}R + 50$ mm

FIG. 5—RECOMMENDED MINIMUM DIMENSIONS FOR TWO-HANDED ACCESS, 95TH PERCENTILE