

TABLE 10-B
NUDE-BODY WEIGHT OF MALE CIVILIAN POPULATIONS

Population	Percentiles ¹ (lb)					Standard Deviation
	1st	5th	50th	95th	99th	
Railroad travelers ²		132 *	167*	218 *		
Truck and bus drivers ³		129	164	213	247	
Airline pilots ⁴		(134)	168	(201)		20 3
Industrial workers ⁵		(130)*	170*	(210)*		24 5
College students ⁶		(112)	142	(172)		18 1
Eastern, 18 yr old ⁷		(122)	150	(178)		17 2
Eastern, 19 yr old ⁸		(132)	159	(187)		16 2
Midwest, 18 yr old ⁹		(115)	148	(180)		19.7
Midwest, 18-22 yr old ¹⁰		(118)	156	(195)		23 5
Draft registrants ¹¹						
18-19 yr old		(106)	141	(176)		21 1
20-24 yr old		(109)	146	(183)		22 4
25-29 yr old		(110)	151	(192)		24 8
30-34 yr old		(110)	153	(195)		25 8
35-37 yr old		(111)	154	(197)		26 1
Spanish-American-War veterans	110	118	153	190	200	22.1
Canadians ¹²						
18-19 yr old			140			
20-24 yr old			151			
25-29 yr old			157			
30-34 yr old			168			
35-44 yr old			165			
45-54 yr old			161			
55-64 yr old			159			
More than 64 yr old			156			

¹ Percentiles in parentheses were computed from the 50th percentile using the S D. Because of the skewed distribution of weight, these values might differ somewhat from the true values and should be used with caution.

² Hooton, 1945

³ McFarland, et al., 1958

⁴ McCormick, 1947

⁵ Tyroler, 1958

⁶ Diehl, 1933a

⁷ Bowles, 1932

* Including shoes and indoor clothing (subtract 5 or 6 lb for nude weight)

⁸ Heath, 1945

⁹ Damon, 1955

¹⁰ Elbel, 1954

¹¹ Karpinos, 1958

¹² Pett and Ogilvie, 1957

From C. T. Morgan, et al. *Human Engineering Guide to Equipment Design*. New York, McGraw-Hill Book Co., 1963. Used with permission of the publisher.

be read at the same time, they should be pointing the same direction when in the desired range. This will reduce check-reading time and increase accuracy.

Principle of coding. All displays should be coded (or labeled) so that the operator can tell immediately just what mechanism the display refers to, what units are measured, and

what the critical range is.

Labeling is especially important if operators are unfamiliar with the equipment.

The effectiveness of labels is greatly affected by the environment. If the equipment is being used in a dimly lighted area, illumination must be provided. Glare, of course, may be a problem in a brightly lighted room.

Other problems may be caused by vibration,