

APPENDIX A

VERIFYING THE CENTER OF BALANCE ON A DRAS PLATFORM LOAD

VERIFYING THE CENTER OF BALANCE

A-1. The center of balance (CB) of a DRAS load must be verified and marked on each side of the platform. The pole method and the calculation method are two ways of verifying the CB. The instructions for these methods are given in Figures A-1 and A-2.

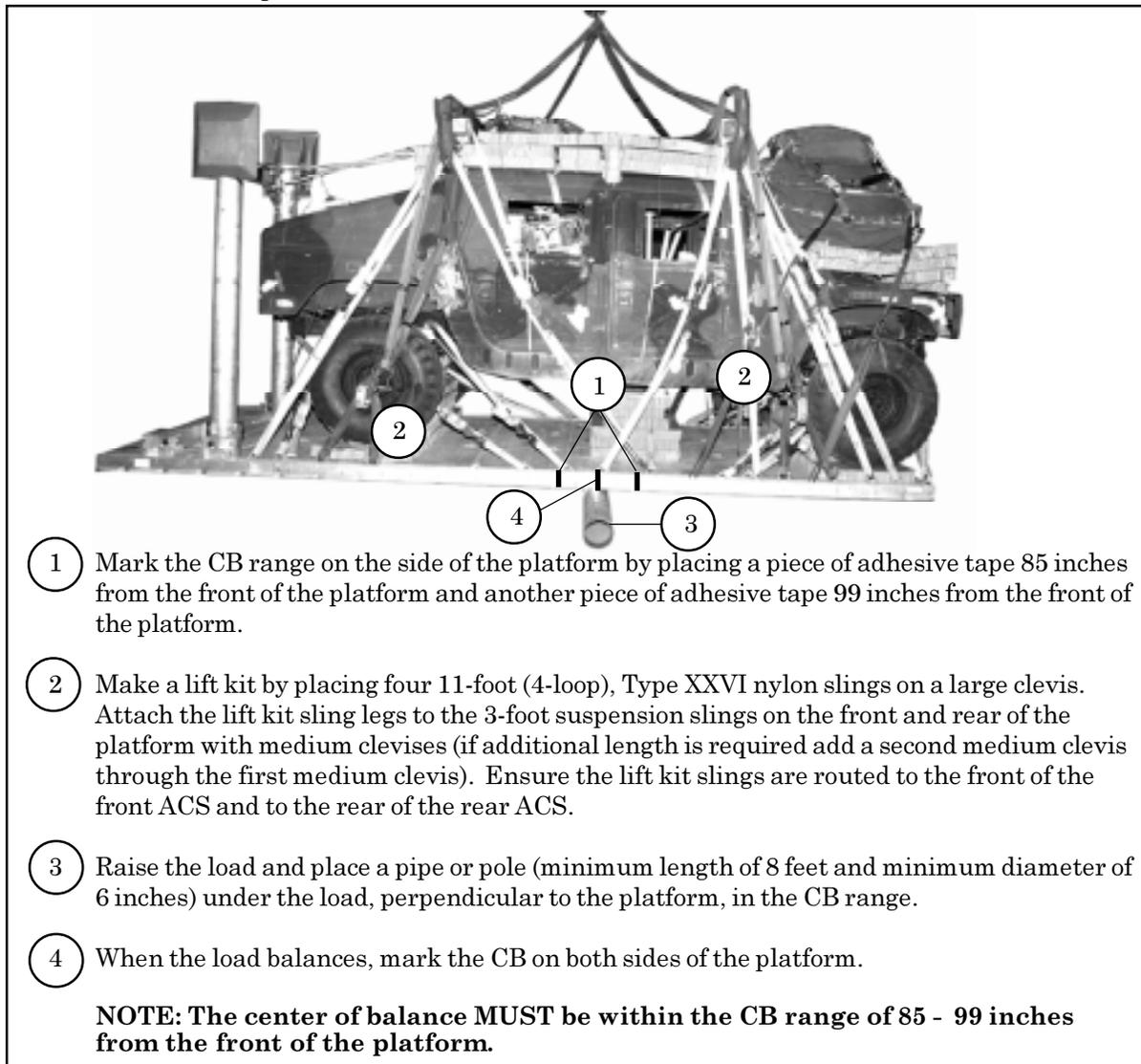
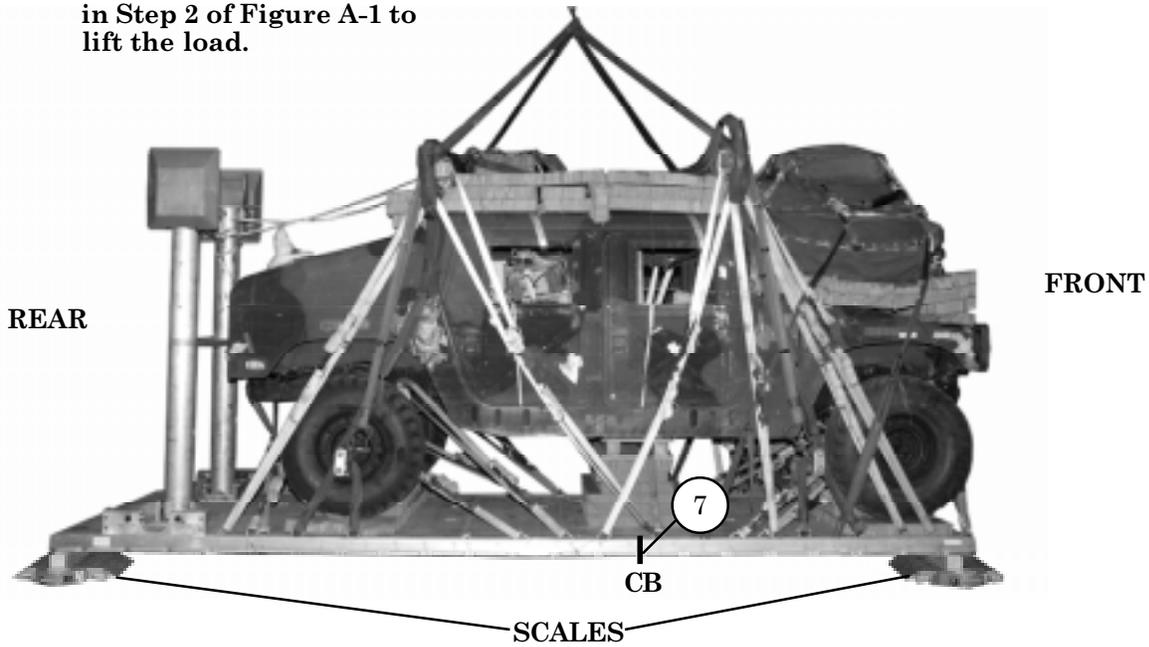


Figure A-1. Verifying CB Using the Pole Method

NOTE: Use the lift kit and instructions in Step 2 of Figure A-1 to lift the load.



⑥ — $\frac{L \times RW}{TW} = CB$ in inches from front edge of platform

$\frac{216 \text{ inches} \times 4,162 \text{ lbs}}{10,455 \text{ lbs}} = 86 \text{ inches from front edge of platform}$

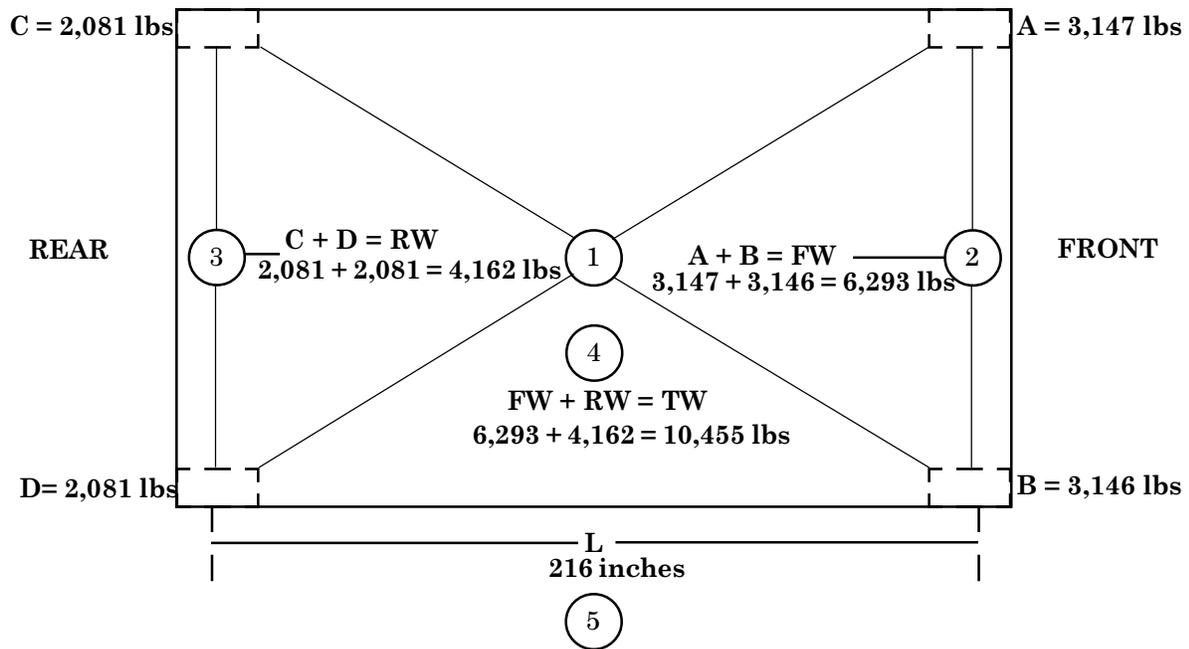


Figure A-2. Verifying CB Using the Calculation Method

- 1 Place a portable scale under each corner of the DRAS platform. Label the front scales A and B and the rear scales C and D. Place the scales the same distance from the front and rear edge of the platform on both sides.
- 2 Add the weights of the front scales together ($A + B = FW$) ($FW =$ Front Weight).
- 3 Add the weights of the rear scales together ($C + D = RW$) ($RW =$ Rear Weight).
- 4 Add the front weight (FW) and the rear weight (RW) together. This equals the total weight ($FW + RW = TW$) ($TW =$ Total Weight).
- 5 Measure the distance in inches between the center of the front scale and the center of the rear scale. This equals the length ($Length = L$).
- 6 Multiply the length (L) by the rear weight (RW) and divide by the total weight (TW). This equals the center of balance (CB) in inches from the front edge of the platform.
- 7 Mark the CB on both sides of the platform.

NOTE: The center of balance MUST be within the CB range of 85 - 99 inches from the front of the platform.

Figure A-2. Verifying CB Using the Calculation Method (continued)

GLOSSARY

ACS	attitude control system
AD	airdrop
AFB	Air Force base
AFJMAN	Air Force Joint Manual
AFR	Air Force regulation
AFTO	Air Force technical order
ALC	Airlift Logistics Center
AGL	above ground level
attn	attention
CB	center of balance
chap	chapter
d	penny
DA	Department of the Army
DC	District of Columbia
DD	Department of Defense
diam	diameter
DRAS	dual row airdrop system
fig	figure
FM	field manual
ft	foot/feet
gal	gallon
HMMWV	high mobility multipurpose wheeled vehicle
HQ	headquarters
in	inch
JAI	joint airdrop inspector
lb	pound
MAJCOM	Major Command
LV	low-velocity
MCRP	Marine Corps Reference Publication
mm	millimeter
NSN	national stock number
OVE	on-vehicular equipment
PFA	platform fitting assembly
TM	technical manual
TO	technical order
TRADOC	US Army Training and Doctrine Command
US	United States
wt	weight
w	with
w/o	without
yd	yard

REFERENCES

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