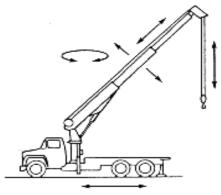
APPENDIX K

CRANES, DERRICKS, AND HOOKS

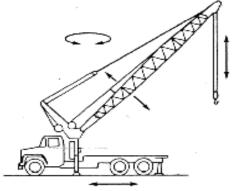
FIGURE K-1

MOBILE AND LOCOMOTIVE CRANES



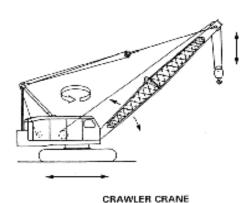
GENERAL NOTE: The boom may have a base boom structure of sections (upper and lawer) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional length.

COMMERCIAL TRUCK-MOUNTED CRANE — TELESCOPING BOOM



GENERAL NOTE: The boom may have a base boom structure of sections (upper and lower) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional langth.

COMMERCIAL TRUCK-MOUNTED CRANE — NONTELESCOPING BOOM



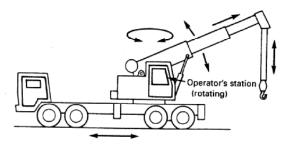
GENERAL NOTE: The boom may have a base boom structure of sections (upper and lower) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional longth.

(retating)

CRAWLER CRANE

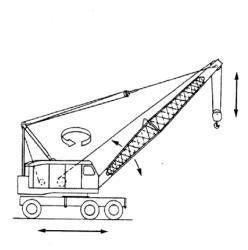
— TELESCOPING BOOM

MOBILE AND LOCOMOTIVE CRANES

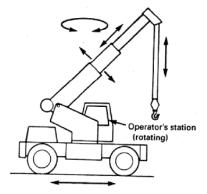


GENERAL NOTE: The boom may have a base boom structure of sections (upper and lower) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional length.

WHEEL-MOUNTED CRANE — TELESCOPING BOOM (MULTIPLE CONTROL STATION)



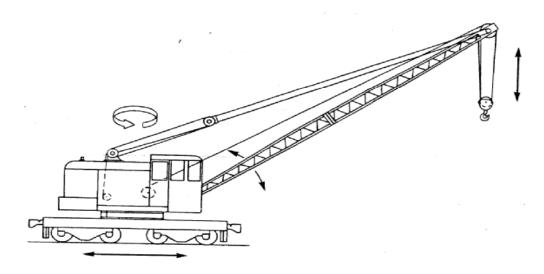
WHEEL-MOUNTED CRANE (SINGLE CONTROL STATION)



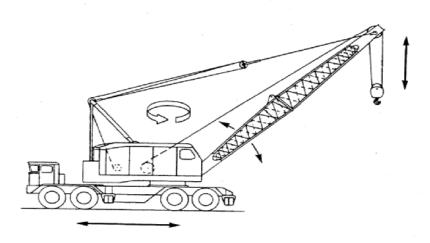
GENERAL NOTE: The boom may have a base boom structure of sections (upper and lower) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional length.

WHEEL-MOUNTED CRANE — TELESCOPING BOOM (SINGLE CONTROL STATION)

FIGURE K-1 (CONTINUED) MOBILE AND LOCOMOTIVE CRANES

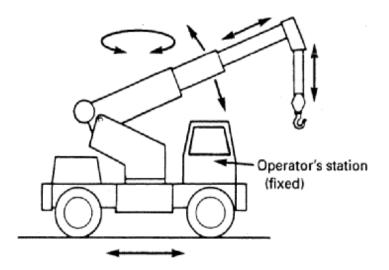


LOCOMOTIVE CRANE



WHEEL-MOUNTED CRANE (MULTIPLE CONTROL STATION)

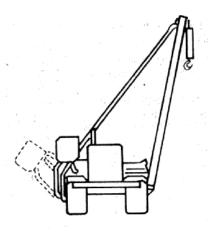
FIGURE K-1 (CONTINUED) MOBILE AND LOCOMOTIVE CRANES

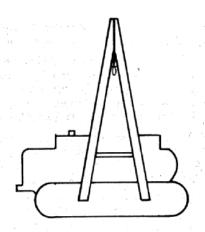


GENERAL NOTE: The boom may have a base boom structure of sections (upper and lower) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional length.

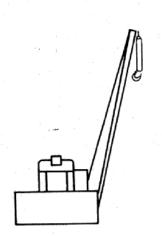
WHEEL-MOUNTED CRANE --TELESCOPING BOOM (SINGLE CONTROL STATION)

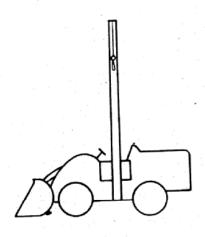
MOBILE AND LOCOMOTIVE CRANES





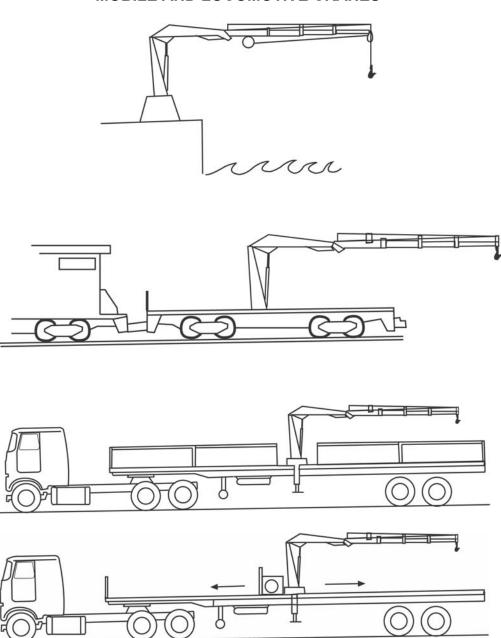
TRACK-TYPE TRACTOR SIDE BOOM



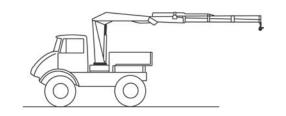


WHEEL-TYPE TRACTOR SIDE BOOM

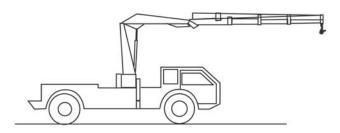
MOBILE AND LOCOMOTIVE CRANES



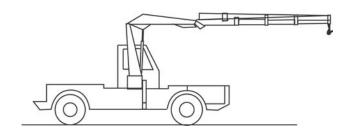
MOBILE AND LOCOMOTIVE CRANES



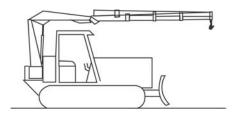
OFF-ROAD VEHICLE



WHEEL-MOUNTED OFF-ROAD DUAL CONTROL STATION

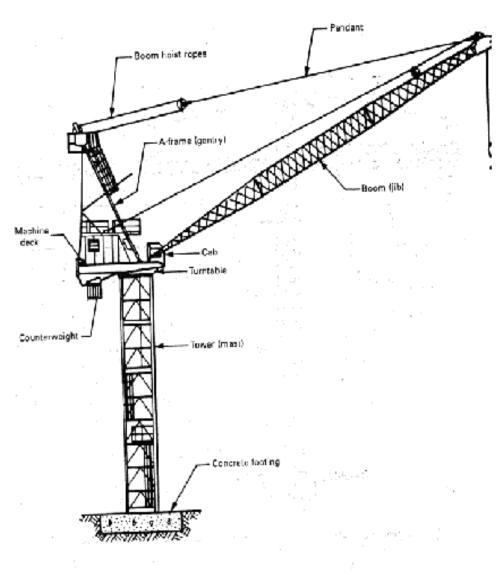


WHEEL-MOUNTED OFF-ROAD SINGLE CONTROL STATION



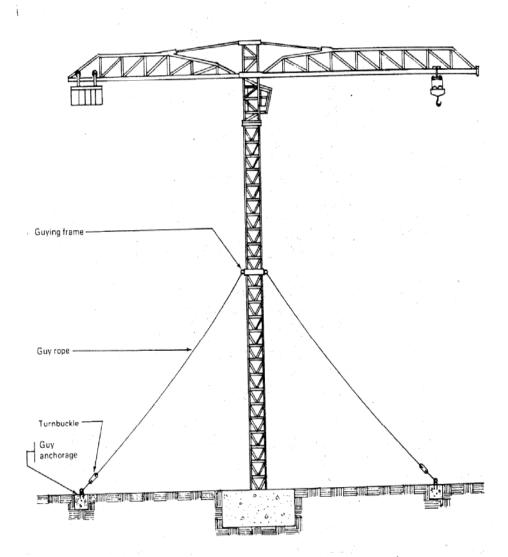
CRAWLER-MOUNTED OFF-ROAD SINGLE CONTROL STATION

FIGURE K-2
CONSTRUCTION TOWER CRANES



LUFFING TOWER CRANE — STATIC BASE, FREE STANDING CRANE

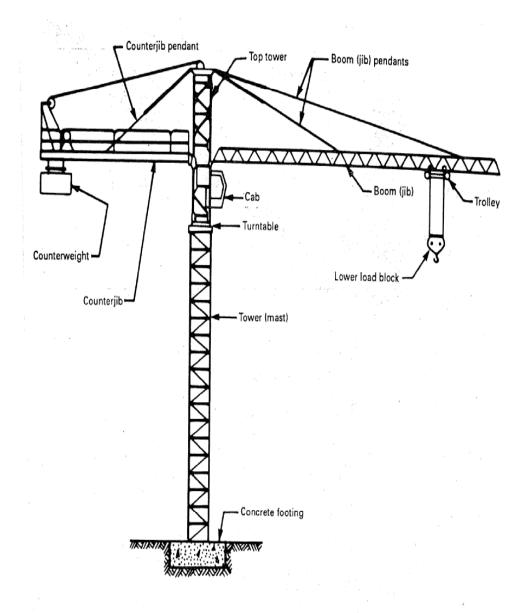
FIGURE K-2 (CONTINUED) CONSTRUCTION TOWER CRANES



GENERAL NOTE: Three or more guys to be provided, symmetrically arranged.

GUYED TOWER CRANE

FIGURE K-2 (CONTINUED) TOWER CRANES



HAMMERHEAD TOWER CRANE — STATIC BASE, FREE STANDING CRANE

FIGURE K-3
OVERHEAD AND GANTRY CRANES

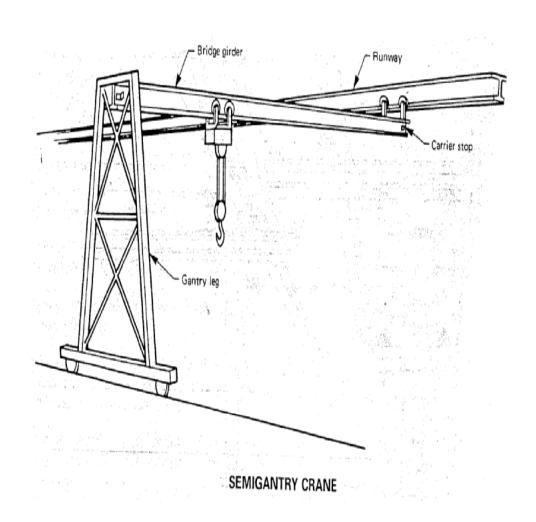
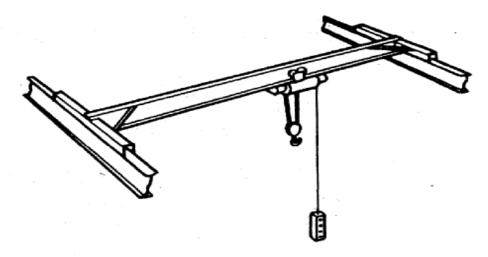
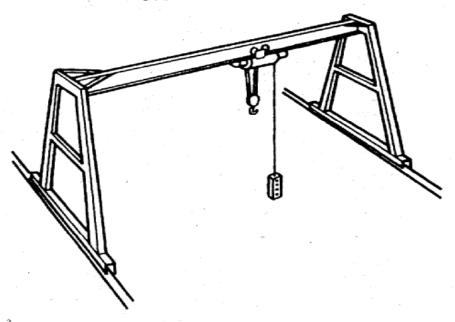


FIGURE K-3 (CONTINUED)

OVERHEAD AND GANTRY CRANES

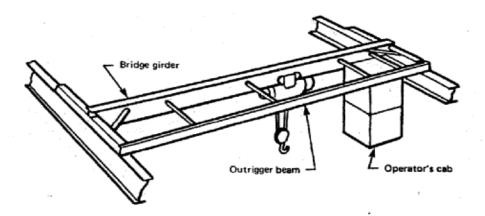


OVERHEAD FLOOR-OPERATED CRANE

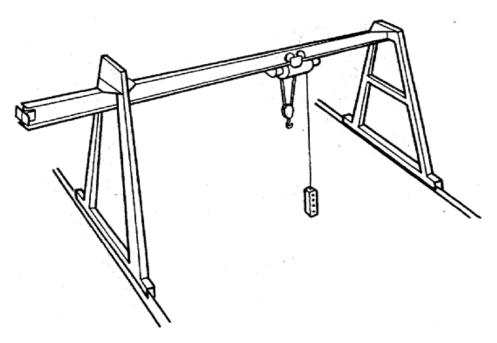


GANTRY CRANE

FIGURE K-3 (CONTINUED) OVERHEAD AND GANTRY CRANES



OVERHEAD CAB-OPERATED CRANE



CANTILEVER GANTRY CRANE

FIGURE K-4
CAB-OPERATED CRANES

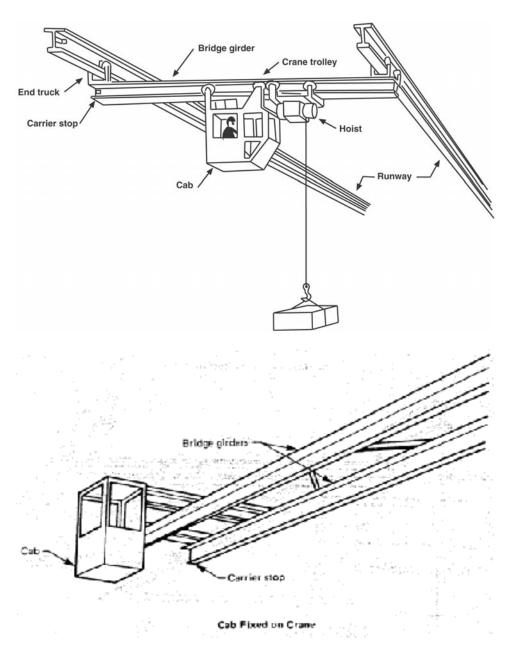
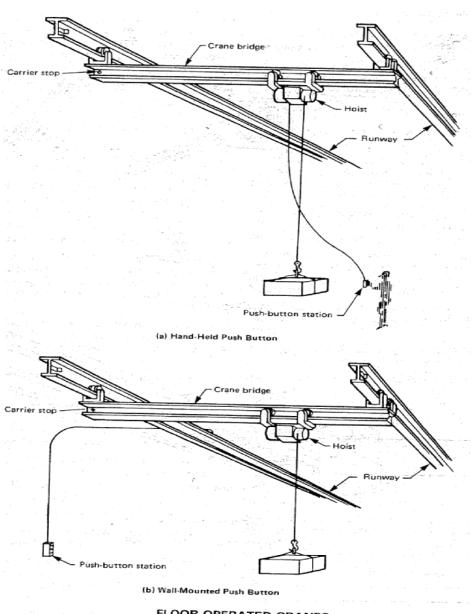


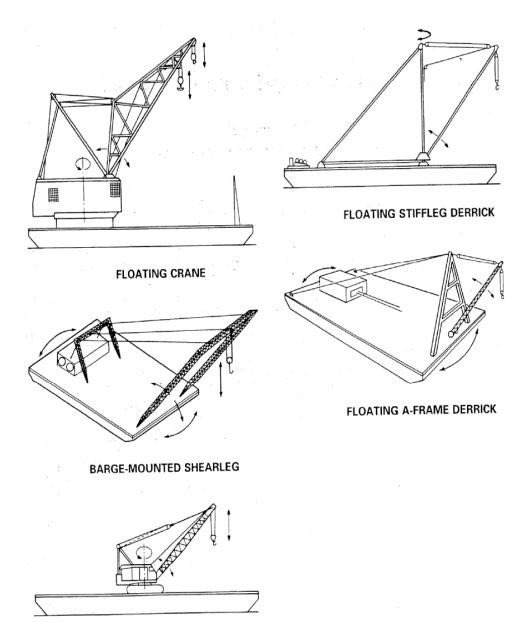
FIGURE K-5 **FLOOR-OPERATED CRANES**



FLOOR-OPERATED CRANES

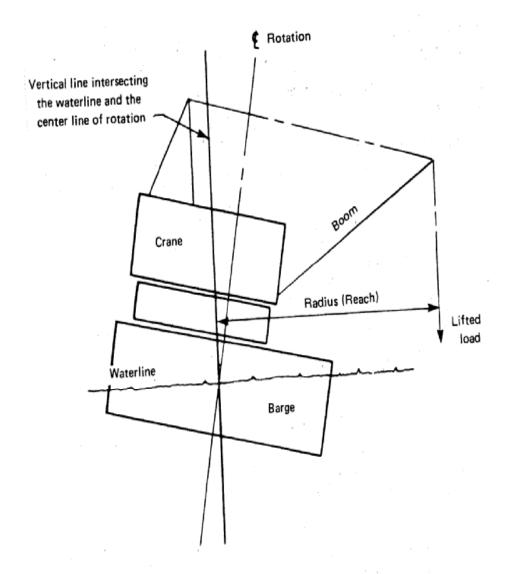
FIGURE K-6

FLOATING CRANES



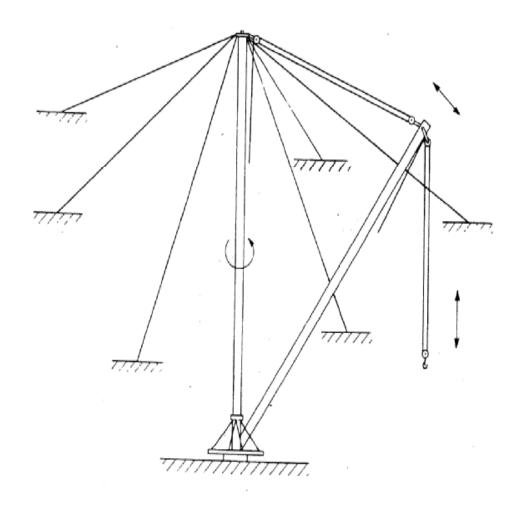
BARGE-MOUNTED LAND CRANE

FIGURE K-6 (CONTINUED) FLOATING CRANES



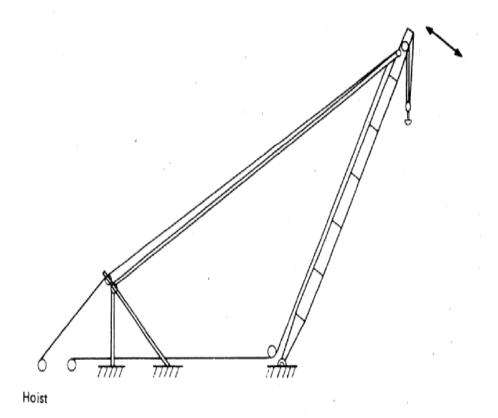
REACH FOR FLOATING CRANES

FIGURE K-7
DERRICKS



GUY DERRICK

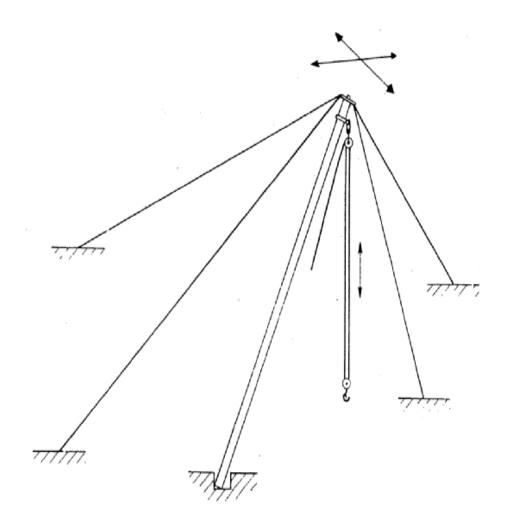
FIGURE K-7 (CONTINUED) DERRICKS



SHEARLEG DERRICK

FIGURE K-7 (CONTINUED)

DERRICKS



GIN POLE DERRICK

FIGURE K-7 (CONTINUED) DERRICKS

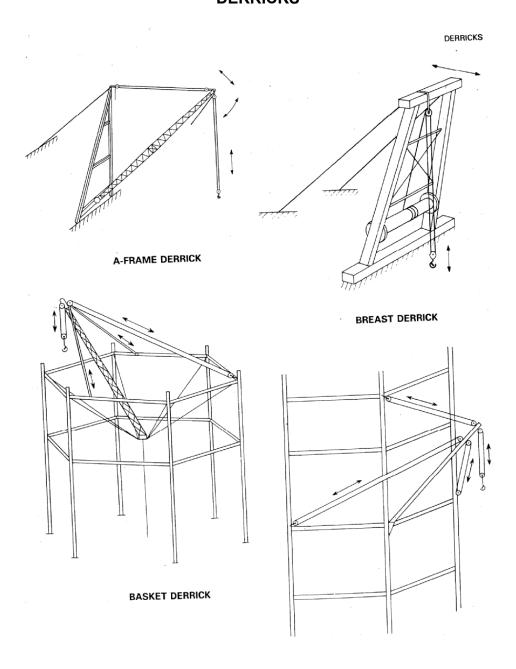


FIGURE K-8
DROP SECTION (LIFT SECTION)

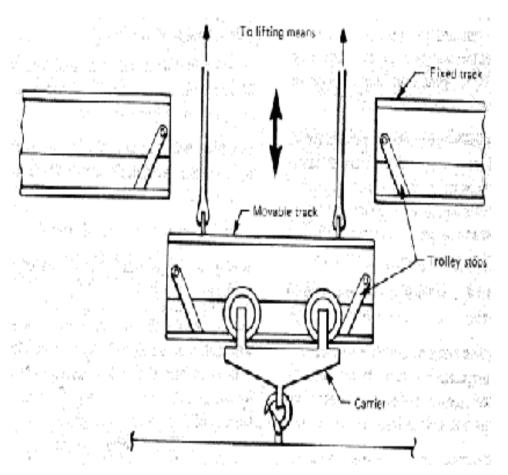
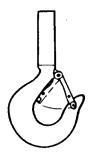


FIGURE K-9

HOOKS



SELF-CLOSING TIPLOCK LATCH (EYE HOOK)



SELF-CLOSING TIPLOCK LATCH (SHANK HOOK)



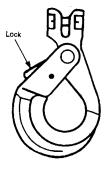
SELF-CLOSING BAIL (EYE HOOK)



SELF-CLOSING FLAPPER LATCH (SWIVEL HOOK)



SELF-CLOSING FLAPPER LATCH (SHANK HOOK)



SELF-LOCKING CLEVIS HOOK (CLOSED)



EYE GRAB HOOK