



NATIONAL N-95

Truck-Mounted Articulating Cranes and Accessories

Maximum Capacity: 15,500 Pounds (7.1 Metric Tons)

Reach Above Truck Frame: 45 Feet (13.7 Meters)

Reach Below Truck Frame: 30 Feet (9.1 Meters)

Horizontal Reach: 39 Feet (11.9 Meters)



**America's Truck-Mounted
Hydraulic Crane Leader**



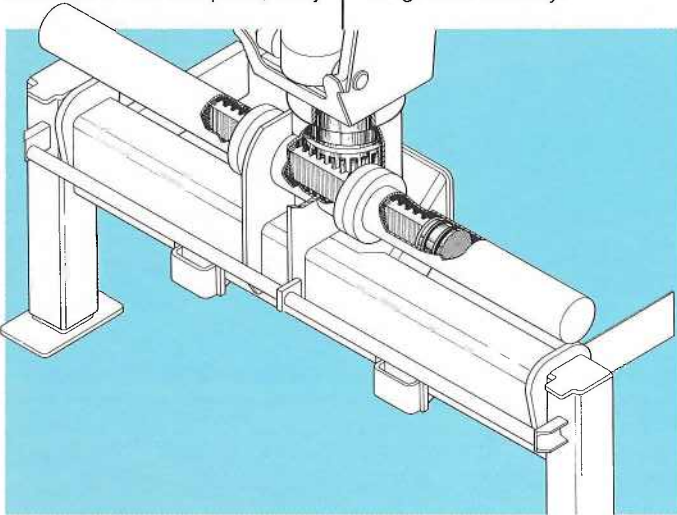


National Warranty, Parts and Service

Rack and pinion rotation

All National Articulating Cranes give you the precision and control of rack and pinion rotation. Our rack and pinion system is simple, reliable and, because it has few parts, easy

to maintain. Service is easy. Rack and pinion rotation also reduces the bulk of the crane frame above the truck, lowering the center of gravity for greater stability.



The National Testing Program

National Crane established its original product durability standards by carefully evaluating the performance of competitive machines. Taking the best performances from these tests, National engineers set their own standards **more than 50% higher!** This is the same testing program each National must pass today.

Before a new model is released for production manufacturing it is subjected to state-of-the-art testing. For example, a plastic-based "brittle lacquer" coating is applied to the boom. After loading the boom, test engineers inspect the coating for cracks. The special lacquer has virtually no elastic qualities, so stretching or deformation of the metal shows up in "fractures" of the coating, perpendicular to the direction of stretching.

This procedure indicates where engineers are to place strain gauges, tiny chips printed with electronic circuitry which expand or

contract with changes in the metal. Minute changes in electrical resistance are measured by a computerized strain gauge monitor and printed out for engineering studies. Strain gauges measure metal deformation as small as one-millionth of an inch.

After strain gauge testing, the prototype of each new model undergoes life-cycle testing. The crane is operated at full-load through a full life-cycle under close scrutiny. Outriggers, frames, and other components are loaded and rotated through a complete range of motion for the prescribed number of cycles.

More than 400 individual quality control inspections are made on each National crane during manufacture and assembly. National attention to testing ensures that each crane delivered to the field is as close to perfect as state-of-the-art technology permits.

The National Warranty

National's warranty covers your crane against defects in materials or workmanship for **six full months** from the date of shipment, subject to the conditions of the warranty.

When you select a National crane, you're getting more than just a crane. You're getting a nationwide dealer warranty service network, strong warranty protection and our special concern for every product we make.

Read our warranty. Then, don't settle for less. For complete information, write National Warranty Service, Waverly, NE 68462.

The National Parts System

Authorized National Crane dealers maintain a parts supply to support the National cranes in each dealer's area. If a dealer cannot immediately supply a needed part, the factory maintains a back-up parts supply that provides 24-hour parts shipping in 85% of

all breakdown rush orders. National's responsiveness to dealer requests means that your crane will be back on the job fast. National maintains a highly trained Service and Parts staff to answer dealer service questions and expedite parts shipping.

The National Service Center

National maintains a well-equipped service center where we do all our factory crane mounting. The central location of our Service Center makes it easy to return cranes for special modifications or extreme repairs. Most National dealers can perform all but the most unusual modifications or most serious repairs.

Should you need to return your crane to us for modification, warranty repair or other service, we will give it priority care and see it's returned as soon as possible.



Caution

Do not operate crane booms, jib extensions, any accessories, or loads within 10 feet (3m) of live power lines.

Jib and boom capacities shown are maximum for each section. Do not exceed capacities at reduced radii.





National N-95 Mounting Specifications

Mounting

It is essential that the truck used for mounting this crane meet the minimum requirements (shown at right) for capacity loads.

Minimum Truck Specifications

180° Working Area

This vehicle will permit lifting capacity loads in all areas around the rear of the vehicle in an 180° arc from outrigger to outrigger. No load should be lifted over the front of the vehicle unless extra stabilizing provisions are made, such as the addition of front stabilizers or extra weight in the truck bed.

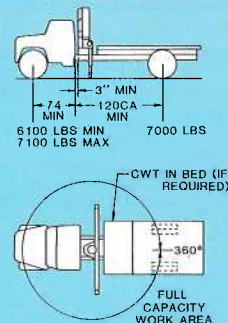
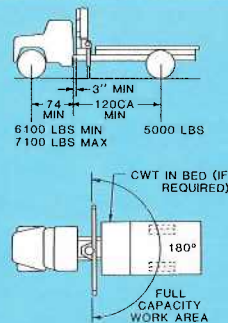
360° Working Area

This vehicle will permit lifting capacity loads in all areas around the vehicle in a 360° arc. Caution should be employed when rotating from the rear to front as the vehicle springs will compress and cause a change in the level of the vehicle. Always rotate loads slowly and smoothly to maximize control.

Minimum Wheelbase	194 inches	194 inches
Rear of Cab to Rear Axle	120 inches	120 inches
Recommended Axle Rating (Front)*	10,860 pounds GAWR*	10,860 pounds GAWR*
Recommended Axle Rating (Rear)	18,500 pounds GAWR	18,500 pounds GAWR
Working Area	180°	360°
Truck Weight	11,100 pounds	13,100 pounds
Chassis Weight Front Axle*	6,100 pounds minimum* 7,100 pounds maximum	6,100 pounds minimum* 7,100 pounds maximum
Chassis Weight Rear Axle	5,000 pounds minimum	7,000 pounds minimum
Frame	21-inch ³ section modulus with 50,000 PSI yield steel = 1,050,000 in-lb rbm 14-inch ³ section modulus with 100,000 PSI yield steel = 1,400,000 in-lb rbm	
Frame Height	42 inches or less preferred	
Power Take-Off	70-80 percent of engine speed. Minimum horsepower 30 at 1,400 rpm	

NOTES:

- (1) GAWR means Gross Axle Weight Rating and is dependent on all components of the vehicle such as axles, tires, wheels, springs, brakes, steering and frame strength meeting manufacturer's recommendations. **Always specify GAWR when purchasing trucks.**
- (2) Minimum axle requirements may increase with use of diesel engines, longer wheelbase or service bodies. Contact factory for further information.
- (3) Chassis weight includes bed.
- (4) Diesel engines require variable speed governor.



*If front axle chassis weight is less than 6,100 pounds, counterweight may be required to lift rated capacity loads to keep unit stable.





**Pallet Fork**

Turns your N-95 into a versatile, payload-packing fork lift. Great for delivering palletized materials where you want them. 4,400 pounds (1,996 kg) capacity with adjustable throat and teeth. Handles most loads with ease. Available with hydraulic leveling or with a manual slide collar for leveling. For extra versatility, specify a National Hydraulic Rotator.

Capacity 4,400 lbs
Throat Opening 41" to 65"
 (adjustable)

Tooth Length 38½"

Tooth Width 33.5" to 57"
 (outside to outside) min. max.

Weight

MKF 350 lbs.

HKF 350 lbs.

HKFR 450 lbs.

Model MKF

(Manual leveling, adjustable throat)

Model HKF

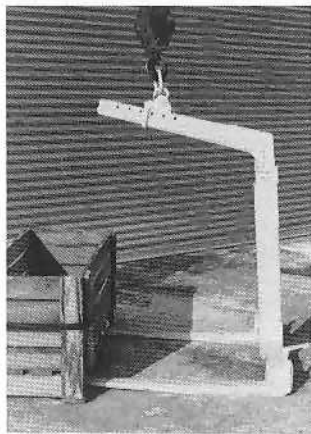
(Hydraulic leveling, adjustable throat)

Requires AH1

Model HKFR

(Hydraulic leveling, adjustable throat with hydraulic rotator)

Requires AH2

**Winch**

This extra-capacity, heavy-duty winch handles up to 4,400 pounds with a single part block and 6,150 pounds with a two-part block. Easy single-pin attachment of boom-tip sheave head. Includes winch control and the anti-two-block feature to prevent cable damage when winching up or extending the

boom without paying out the winch cable. The winch option reduces the capacities by approximately 200 pounds and eliminates the hook point on the outer section boom.

Model N5**Line Pull**

1st wrap 5,300 lbs.

2nd wrap 4,800 lbs.

3rd wrap 4,400 lbs.

Speed

1st wrap 62 ft./min.

2nd wrap 69 ft./min.

3rd wrap 76 ft./min.

Cable

90 ft. of 7/16" rotation resistant cable.

Winch

7½" dia. drum, 11.62" dia. flange, 6.38" wide with safety brake. OSHA required 18:1 ratio drum diameter to cable diameter.

Sheaves

Run on roller bearings with OSHA required 18:1 ratio sheave diameter to cable diameter.

Controls

Includes hydraulic control valve and hoses to winch.

One Person Basket

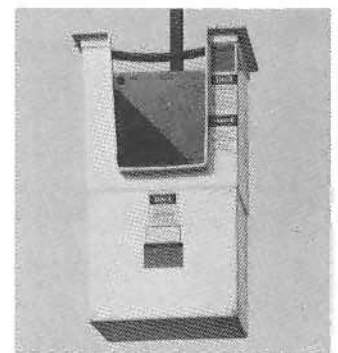
This strong, lightweight fiberglass basket with 300-pound capacity puts personnel where you want them for the occasional tough maintenance and installation jobs. Easy on-off. Safety belts included. Gravity or lock-type leveling.

Capacity 300 lbs.

Weight 150 lbs.

Dimensions 22" x 22" x 42"

Construction Fiberglass

**2 Models**

B1, gravity hung without lock
 B1-L, gravity hung with swing lock

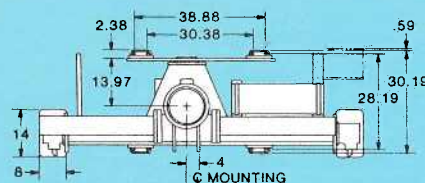
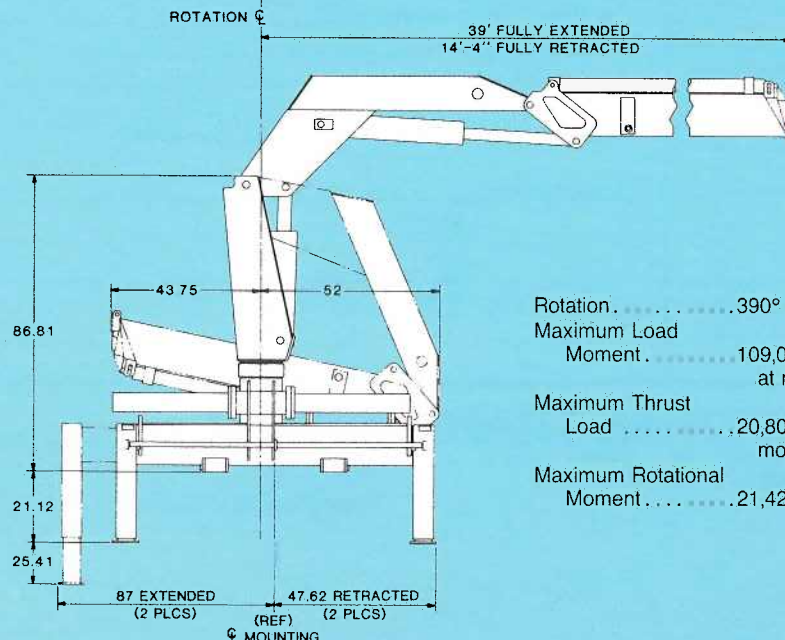
Includes safety belt and lanyard. Cannot be used simultaneously with winch.

Model B1**Model B1-L**

(with lock)

Caution

Do not operate crane booms, jib extensions, any accessories, or loads within 10 feet (3 m) of live power lines. Jib and boom capacities shown are maximum for each section. Do not exceed capacities at reduced radii.

**National N-95
Dimensional Specifications**

Rotation 390° noncontinuous
 Maximum Load
 Moment 109,000 foot/pounds
 at mounting surface
 Maximum Thrust
 Load 20,800 pounds at
 mounting surface
 Maximum Rotational
 Moment 21,420 foot/pounds

