

National Series 1255

**The Heavy-duty Lifting System for
Your Public Works Department**

**Maximum Vertical Reach: 102 Feet
Maximum Capacity at 10-Foot Radius: 35,000 Pounds**



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

Here's what the National 1255 offers your public works operations

National Crane, America's leading manufacturer of commercial truck-mounted cranes, introduces a unit — the National 1255 — ideally suited to public works applications:

- Loading of trees and brush
- Tree trimming
- Picking up scrap
- Loading and hauling of loose materials
- Cleaning ditches
- Sign service
- Christmas decoration
- Maintain de-energized streetlights
- Service pump stations
- Handle culverts
- Clean debris from bridge piers and docks
- Clean catch basins
- Clean flumes for water department
- Handle pallets of materials
- Service equipment
- Set street plates
- Building maintenance
- Bridge maintenance
- Lift manholes
- Lift hydrants
- Erect signs
- Set concrete barricades
- Construct guardrails
- Set poles
- Handle transformers

A single National 1255 offers the capabilities necessary to make your Public Works Department considerably more efficient. National's selection of accessories permits a single truck-mounted 1255 to perform jobs that would typically require a whole fleet of vehicles. Here are some of the advantages you enjoy with a National 1255 mounted on a Ford CT8000 chassis:

- 102-foot vertical reach with the 12FJ40M 40-foot manual-pullout, side-stowing jib
- 62-foot fully-hydraulic vertical reach
- 17½-ton rated capacity at a 10-foot boom radius
- Proportional boom design allowing higher lifting capacities in normal operating areas
- National's industry-acclaimed box-section boom construction
- Large bolt-in wear pads in boom that last longer and are easier to replace

Note: The clam stowed with the Series 1255 pictured on the cover was customer-installed and does not portray factory installation of the accessory.



- Mounts on compact Ford CT8000 with a short wheelbase for maneuverability and short turning radius
- Two sets of hydraulic cross-frame outriggers, each with an 18½-foot span
- Standard operator's cabin that rotates with boom movement
- Single-station control console with extra-fine metering and low spool forces, directly coupled with adjustable levers for precise control of crane functions
- Prelubricated, steel-backed control rod pivot bearings resist wear and reduce friction for exceptionally smooth operation
- Horn, start/stop switches, pressure gauge monitoring all functions, and foot and hand control throttle are located at the control station
- Standard three-pump system isolates the winch and rotation functions from other crane functions to provide independent operation capability
- Telescopic angle indicator located for easy operator visibility
- Planetary rotation gearbox with a hydraulic release brake and a slip-through feature that helps protect the rotation system against damage from accidental side loading
- An all new standard high performance planetary winch with roller bearings throughout and highly efficient, axial

piston motor to provide the smoothest and fastest winch operation National has ever offered

- One-, two- and three-part load block standard
- Sheave case rigged with two sheaves on top and three underneath for easy multiple-part reeving and to accommodate the optional auxiliary winch
- Optional auxiliary planetary winch for use in picking lighter loads at higher speed when the standard winch is rigged for heavy-load lifting at slower speeds with multiple-part reeving
- Boom pivot and hoist cylinder bearings that provide longer life and lower maintenance
- Oil filter and control valves located externally for convenient serviceability
- Installation on a high-power commercial chassis provides unparalleled mobility
- Mounting: subbase supplied to eliminate truck reinforcing and, in some cases, counterweight (many diesel engine trucks require no counterweight)
- Standard horizontal, behind-the-cab boom rest reduces stress on the crane-frame and protects the crane from transit damage
- 100 gallon oil reservoir with dual spin-on return line filters, dirty filter indicator, oil level and temperature gauge,

magnetic plug, clean-out, three suction strainers, and diffuser

- Custom-built three-piece bed to provide maximum flat payload area and operator mobility
- Rear bumper complies to recommended DOT under-ride protection
- An optional positive swing lock prevents the rotation of the turret/boom when the crane is stowed for transit
- Optional glide swing allows operator to manually apply a swing brake (when swinging the turret/boom he can coast the unit to a stop)

Plus these exclusive National Advantages!

Field-proven durability

- National has manufactured cranes — and only cranes since 1963.
- More than 16,000 field-proven cranes verify National's manufacturing expertise.

Attention to quality

- National's industry-leading testing program subjects all prototype models to state-of-the-art strain gauge and lifecycle testing to verify structural integrity.
- Each 1200 undergoes numerous quality inspections at all levels of manufacture and assembly.

Retained market value

- National cranes traditionally retain higher resale value year after year.

Responsive service

- Each 1200 is backed by strong after-sale service support. Our professional, factory-trained dealer network spans the nation.
- Authorized National dealers maintain a parts stocking program for your 1200.
- When a dealer cannot immediately supply a part, the factory's back-up program provides 24-hour parts shipping in 85% of all breakdown rush orders.

Strong warranty protection

- The 1200 is backed by a solid warranty covering defects in materials and workmanship for six months from the date of shipment.

National 1255 Accessories

The Series 1200 is part of the National Lifting System. You can add to your crane's versatility with National accessories. Weights of all accessories attached to the boom or loadline of the crane must be deducted from the effective lifting capacity. Consult your National dealer for specific accessory availability. Some accessories cannot be used in combination with other accessories or the optional jib.

Pallet Fork

Turns your Series 1200 into a versatile, payload-packing fork lift. Great for delivering palletized material right where you want it. 4,400 lbs. (1,814 kg) capacity with adjustable throat and teeth. Handles most loads with ease.

Capacity:	4,400 lbs. at 20" center
Throat Opening: (adjustable)	41" to 65"
Tooth Length:	38"
Tooth Width: (outside to outside)	33.5" to 57" min. max.
Weight:	350 lbs.

Model MKF

(Manual leveling, adjustable throat)



Hydraulic Oil Cooler

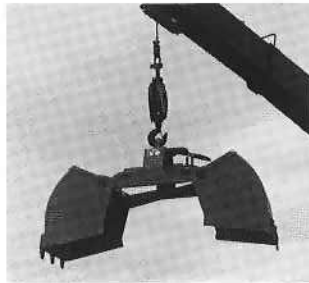
Automatic hydraulic device designed to cool the oil under continuous operation.

Model HOC

Loose Material Clam Bucket

Increase the flexibility of your National crane with a National clam bucket. Use this versatile accessory to load or move up to 1/2 cubic yard of loose materials with each bite. Hooks easily to loadline, comes with hydraulic hose on automatic reel and quick-connecting fittings. Extension hoses are required for use with jibs. Just position the load where you want it and open the bucket.

Model LMC



Front Stabilizer

An optional single leg, center-mounted front stabilizer is available for 360° working ranges.

Auxiliary Winch

An auxiliary high-performance planetary winch may be used to pick lighter loads at higher speeds when the standard winch is rigged for heavy-load lifting at slower speeds with multi-part reeving. This winch, like our standard winch, is filled with 9/16" diameter cable. See the winch data chart on page ten for further information.

One Person Basket

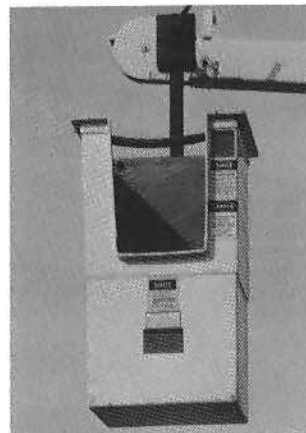
Strong, lightweight fiberglass basket with 300-pound capacity puts personnel where you want them for tough maintenance and installation jobs. Optional dual basket bracket for two-basket operation on main boom. (Note: Jib will accommodate only one basket.) Easy on-off. Safety belts included. With basket(s) attached to the crane, the crane must not be operated at a position where the crane load chart shows less than the following capacities:

- One fiberglass basket — 550 pounds
- Two fiberglass baskets — 1,100 pounds

Model B1

Model B1-L

With lock



Four and Five Part Load Blocks

These optional load blocks provide greater lifting capacities while using the winch.

Boom Length Indicator

This electronic option indicates the boom length on a display panel. Contact the factory for availability and additional information.

Continuous Rotation

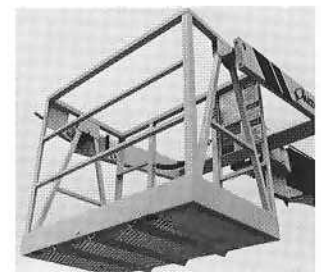
This hydraulic and electrical swivel allows a continuous rotational movement of the turret for convenient load positioning. It is available only on a standard crane with no hydraulic or electronic options.

Two Person Basket

Extra capacity steel basket, swing-mounted to self-level. An adjustable, over-center, lever-operated friction brake for stability and locking. Safety belts included. The basket must not be used in load-rated areas where the crane load chart shows capacities less than 1,150 pounds. The maximum capacity of the basket is 500 pounds.

Model BS-1

5-ft. yoke



Cab Heater

A propane-fueled heater for the 1255 cab provides comfort for the operator in cold weather conditions.

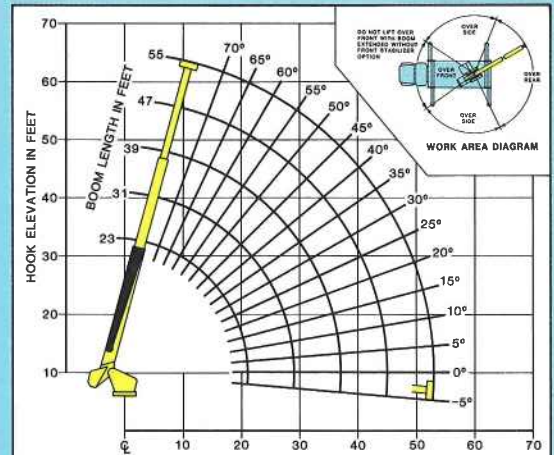
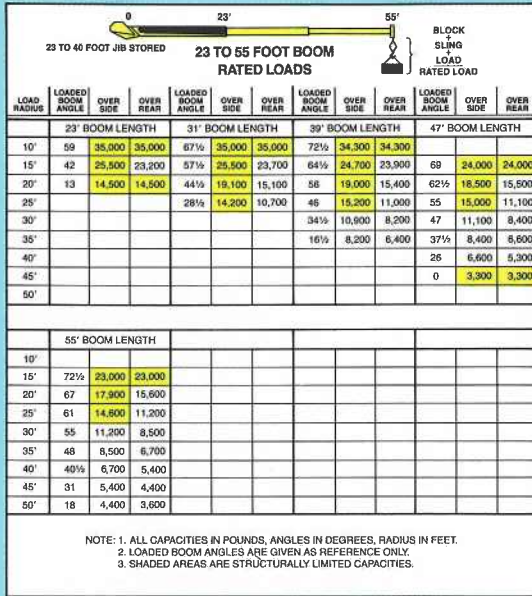
Model CH

Caution

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

National 1255 Load Rating Information

The 1255 is equipped with a 23 to 55-foot, fully hydraulic, three-section proportional boom offering a 62-foot vertical reach. The 40-foot manual pull-out job extends the vertical reach to 102 feet. Note the load rating data on this and the following page.



OPERATING RADIUS FROM C ROTATION IN FEET WITH UNLOADED BOOM.

SET-UP:

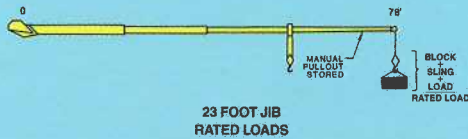
1. Fully extend and set outriggers and level crane.
2. 23 to 40 ft. jib stored on side of main boom.

OPERATION:

1. The 23 ft. boom length capacities are based on boom fully retracted. If not fully retracted, do not exceed 31 ft. boom length capacities.

WINCH DATA

	1 PART	2 PART	3 PART	4 PART	5 PART
MAX. WINCH CAPACITY	7,000 lb.	14,000 lb.	21,000 lb.	28,000 lb.	35,000 lb.
MAX. BOOM LENGTH AT 75° WITH LOAD BLOCK AT GROUND LEVEL	—	—	—	—	46 ft.



SHADED AREAS ARE STRUCTURALLY LIMITED CAPACITIES

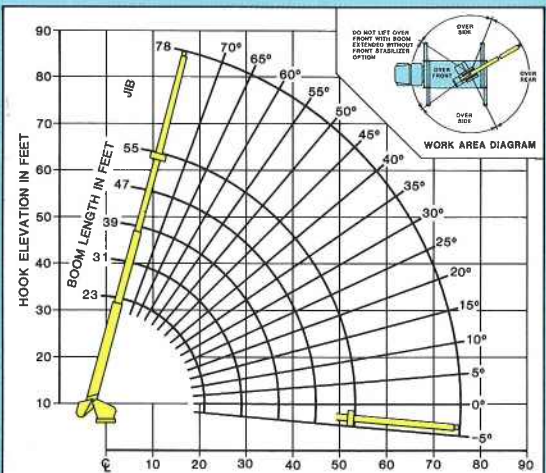
Capacities shown are with 400-pound block rigged on main boom. If 200-pound block is rigged on main boom, add 150 pounds to capacities shown. If no block is rigged on main boom, add 300 pounds to capacities shown.

SET UP

1. Fully extend outriggers and level crane.
2. Rig jib as shown in the operators manual.

OPERATION

1. Operate with jib by radius, when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
3. All jib loads must be lifted with single part reeving.



OPERATING RADIUS FROM C ROTATION IN FEET WITH UNLOADED BOOM.

WINCH DATA

	1 PART	2 PART	3 PART	4 PART	5 PART
MAX. WINCH CAPACITY	7,000 lb.	14,000 lb.	21,000 lb.	28,000 lb.	35,000 lb.
MAX. BOOM LENGTH AT 75° WITH LOAD BLOCK AT GROUND LEVEL	—	—	—	—	46 ft.



**40 FOOT JIB
RATED LOADS**

LOAD RADIUS (FEET)	LOADED BOOM ANGLE (DEGREES)	OVER SIDE (lb)	OVER REAR (lb)
24	74°	4700	4700
31	70°	3800	3800
39	65°	3200	3200
46	60°	2750	2750
53	55°	2350	2350
60	50°	2100	2100
65	45°	1900	1900
71	40°	1750	1750
76	35°	1600	1600
81	30°	1500	1500

SHADED AREAS ARE STRUCTURALLY LIMITED CAPACITIES

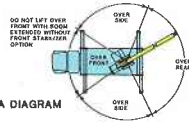
Capacities shown are with 400-pound block rigged on main boom. If 200-pound block is rigged on main boom, add 150 pounds to capacities shown. If no block is rigged on main boom, add 250 pounds to capacities shown.

SET UP

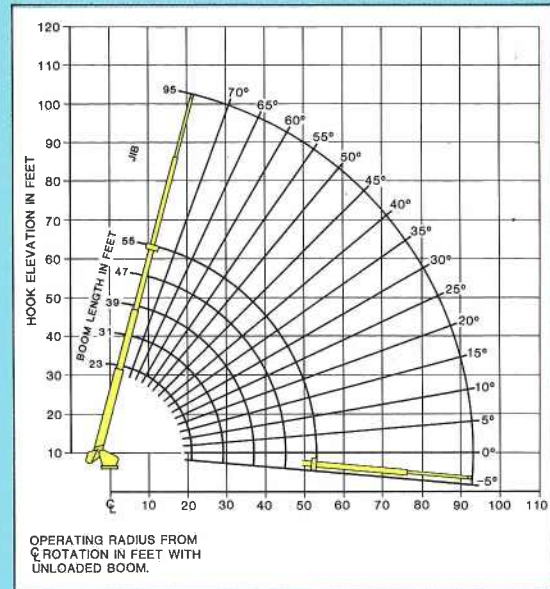
1. Fully extend outriggers and level crane.
2. Rig jib as shown in the operators manual.

OPERATION

1. Operate with jib by radius, when main boom is fully extended. If necessary increase boom angle to maintain loaded radius.
2. Operate with jib by boom angle when main boom is not fully extended. Do not exceed rated jib capacities at any reduced boom lengths.
3. All jib loads must be lifted with single part reving.



WORK AREA DIAGRAM



OPERATING RADIUS FROM C ROTATION IN FEET WITH UNLOADED BOOM.



**23 TO 55 FOOT BOOM
RATED LOADS**

LOAD RADIUS	23' BOOM LENGTH		31' BOOM LENGTH		39' BOOM LENGTH		47' BOOM LENGTH		
	LOADED BOOM ANGLE	OVER SIDE	OVER REAR	LOADED BOOM ANGLE	OVER SIDE	OVER REAR	LOADED BOOM ANGLE	OVER SIDE	OVER REAR
10'	59	33,000	33,000	67½	33,200	33,200	72½	32,800	32,600
15'	42	23,500	21,700	57½	23,700	22,200	64½	23,000	22,500
20'	13	12,500	12,500	44½	17,300	13,800	56	17,300	14,000
25'				28½	12,400	9,400	46	13,500	9,700
30'							34½	9,400	7,000
35'							16½	6,800	5,200
40'								26	6,200
45'								0	1,700
50'									
55' BOOM LENGTH									
10'									
15'	72½	21,500	21,500						
20'	67	16,400	14,300						
25'	61	13,100	10,000						
30'	55	9,700	7,300						
35'	48	7,100	5,500						
40'	40½	5,400	4,300						
45'	31	4,100	3,200						
50'	18	3,100	2,400						

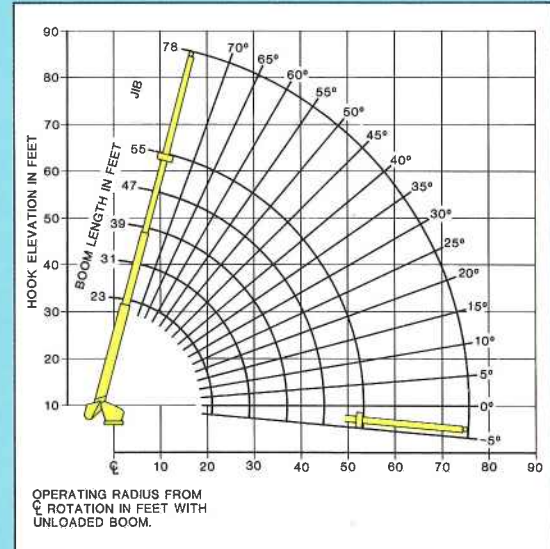
NOTE: 1. ALL CAPACITIES IN POUNDS, ANGLES IN DEGREES, RADIUS IN FEET.
2. LOADED BOOM ANGLES ARE GIVEN AS REFERENCE ONLY.
3. SHADED AREAS ARE STRUCTURALLY LIMITED CAPACITIES.

SET-UP:

1. Fully extend outriggers and level crane.
2. 23 to 40 foot jib pinned on boom tip (at 23 foot length) with 150 lb. downhaul weight freely suspended over jib tip.

OPERATION:

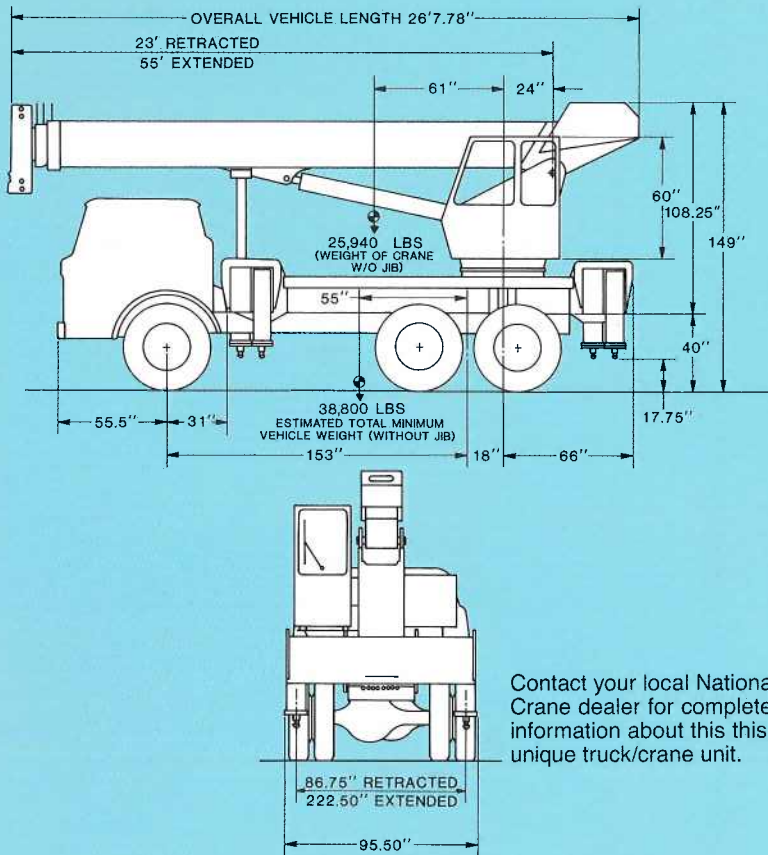
1. Capacities shown are maximum rated loads lifted at the boom tip with the main winch. The 23 foot jib is deployed with the 150 lb. downhaul weight rigged on the auxiliary winch line and freely suspended. DO NOT ATTEMPT ANY LIFT WITH BOTH BLOCKS.
2. When telescoping boom, lower both blocks to avoid two-blocking.
3. 23 foot boom length capacities are based on fully retracted boom.



OPERATING RADIUS FROM C ROTATION IN FEET WITH UNLOADED BOOM.

National 1255 Truck/Crane Specifications

SERIES 1255 ON FORD CT8000



Contact your local National Crane dealer for complete information about this unique truck/crane unit.

TRUCK AND AXLE RATING REQUIREMENTS

Gross axle weight rating (GAWR) front 16,000 pounds*
 Gross axle weight rating (GAWR) rear 34,000 pounds
 Wheelbase 153 inches
 Cab to axle/trunnion (CA/CT), free of obstructions, full width in crane mounting area 122 inches
 Frame section modulus (SM) front axle to rear axle
 38,000 PSI 34.89 inch³
 Estimated bare chassis weight required for stability prior to installation of crane or accessories
 Front 6,700 pounds
 Rear 6,200 pounds

Estimated installed chassis weights for 85% crane stability factor (weight shown in pounds)

	Front axle*	Rear axle	Total chassis weight
With block	14,530	24,670	39,200
With jib and block	15,310	25,010	40,320

*If equipped with any options that significantly add to the front axle weight (i.e., a jib), an axle with an 18,000-pound rating is required.

NOTES:

- (1) Diesel engines require variable speed governor and electric engine shut-off for smooth crane operation.
- (2) Air dryer is required on cranes with continuous rotation.
- (3) GAWR means Gross Axle Weight Rating and is dependent on all components of the vehicle such as axles, tires, springs, frame, etc., meeting manufacturer's recommendation. **Always specify GAWR when purchasing trucks.**

Do not operate cranes or accessories within 10 feet (3m) of live power lines.

1. Load ratings shown on these charts are maximum allowable loads with the outriggers properly extended on a firm, level surface and the crane leveled and mounted on a factory-recommended truck.
2. Always level the crane with the level indicator located at the outrigger control station.
3. The operator must reduce loads to allow for factors

such as wind, ground conditions, operating speeds and the effect of freely swinging loads.

4. Overloading this crane may cause structural collapse or instability.
5. Weights of any accessories attached to the boom or loadline must be deducted from the load chart capacities.
6. Do not exceed jib capacities at any reduced boom lengths.



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Your National Dealer:

National reserves the right to change designs, prices and specifications at any time without notice.