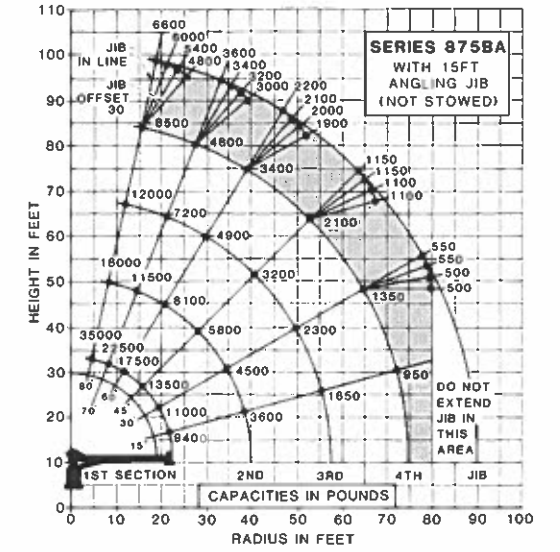
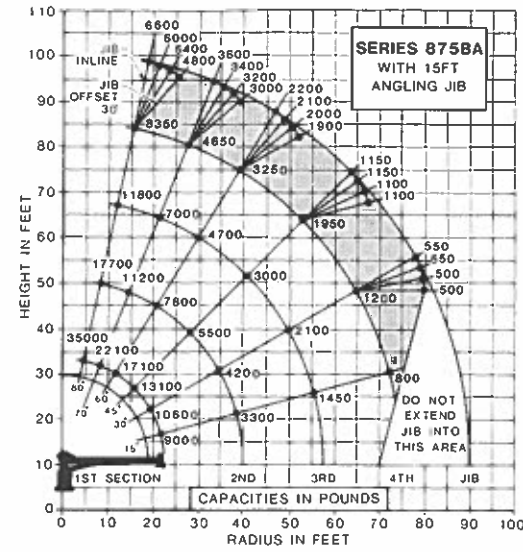
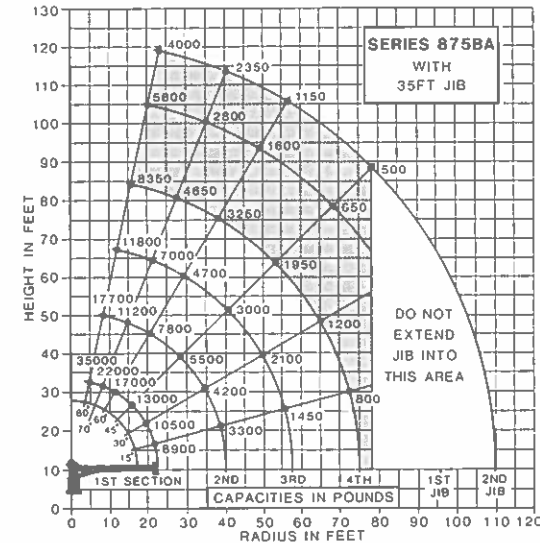
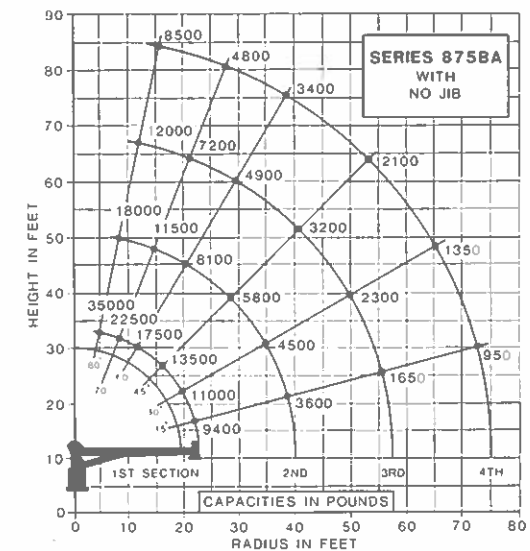
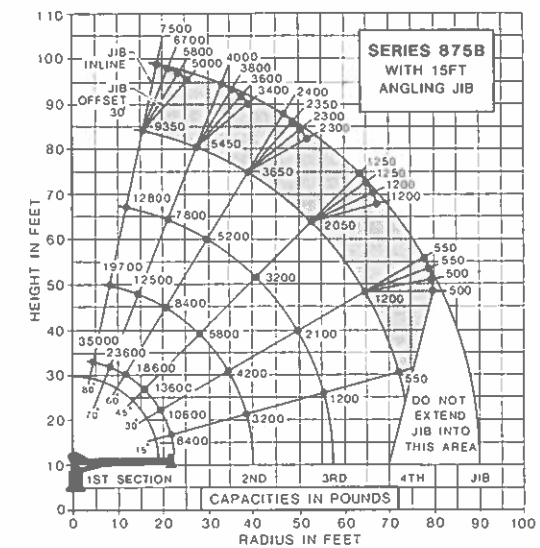
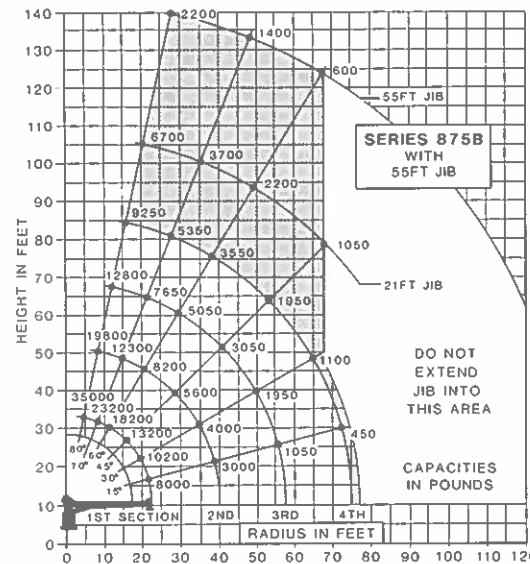
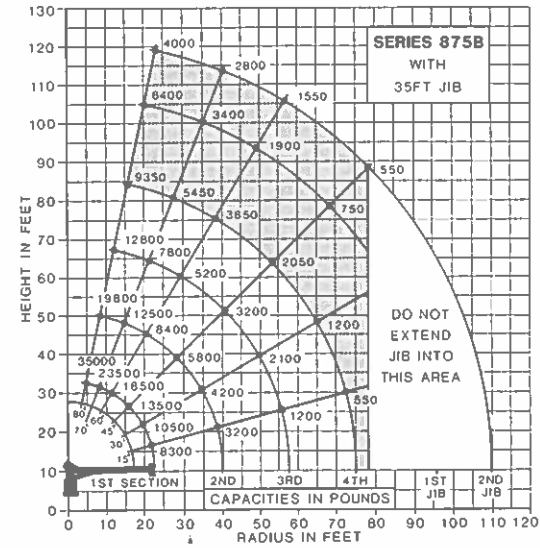
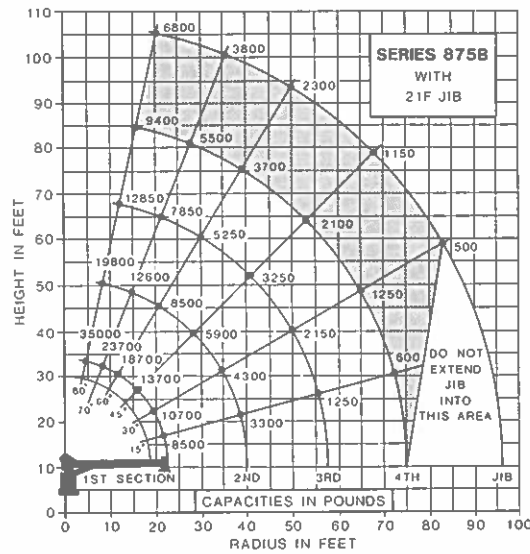


National Series 800B Load Rating Charts



National Series 800B Winch Data

NATIONAL SERIES 800B			1 Part Line	2 Part Line	3 Part Line	4 Part Line	5 Part Line
CAUTION:							
<ul style="list-style-type: none"> Do not deadhead lineblock against boom tip when extending boom. Keep at least three wraps of loadline on drum at all times. Use only the specified cable on this machine. 							
Winch	Cable Supplied	Average Breaking Strength	Lift and Speed	Lift and Speed	Lift and Speed	Lift and Speed	Lift and Speed
Standard Planetary Winch	Standard 9/16" diameter rotation resistant	35,000 lbs.	Data applies to all 800B booms				
	Optional 9/16" diameter 6 x 25 IWRC	29,750 lbs.	7,000 lbs. 150 fpm	14,000 lbs. 75 fpm	21,000 lbs. 50 fpm	28,000 lbs. 37 fpm	35,000 lbs. 30 fpm
Applicable to the 875B boom. †Applicable to all other Series 800B booms. Speeds shown are the same for all Series 800B booms.			7,500 lbs. 8,400 lbs.† 150 fpm	15,000 lbs.* 16,800 lbs.† 75 fpm	22,500 lbs.* 25,000 lbs.† 50 fpm	30,000 lbs.* 34,000 lbs.† 37 fpm	35,000 lbs.* 35,000 lbs.† 30 fpm
With Optional Burst-of-Speed Feature**	Same as corresponding cable data shown above.		3,000 lbs. 240 fpm	6,000 lbs. 120 fpm	9,000 lbs. 80 fpm	12,000 lbs. 60 fpm	15,000 lbs. 48 fpm

All winch pulls and speeds are shown on the third layer (the fourth layer on 875B). Winch pulls would increase on the first and second layers. Winch line speeds would decrease on the first and second layers. Winch line pulls may be limited by the winch capacity or the cable safety factor. These are shown below:

Winch	Bare Drum Pull	Allowable Cable Pull
With standard rotation resistant rope	10,200 pounds	7,000 pounds
With optional 6 x 25 IWRC rope	10,200 pounds	8,400 pounds

**This feature is available with either the standard or optional cable. Ratings are based on intermittent use. High cycle applications may require optional oil cooler.

National Boom Rests

National Series 800B Truck Specifications

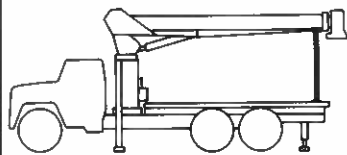
Cranes are tough when they're in use, but they can be severely damaged during travel from job to job. The only way a crane can be protected from this type of wear and damage is a strong, solid, boom rest.

Boom Rests

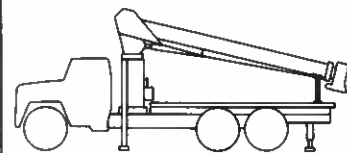
- Add years to the life of your crane
- Reduce stress on the crane frame
- Protect rotation gear from transit damage
- Remove stress from truck frame
- Spread crane load more evenly
- Reduce maintenance and downtime

In addition, boom rests are required to provide a positive way to immobilize your crane for transit.

National Crane supplies two heavy-duty boom rests for strong, sure protection of your crane. There is a quality National boom rest to fit your mounting configuration. All National Cranes must be fitted with a boom rest. All factory mounted cranes will be supplied with a boom rest.



Horizontal rear bed mount for greater load space



Low-profile rear bed mount for lower center of gravity

Mounting Configurations

The versatility of the Series 800B can be enhanced by the mounting configurations described at the right. The configurations are based on the 800B with an 85% stability factor. The complete unit must be installed in accordance with factory requirements and a test performed to determine actual stability and counterweight requirements since individual truck chassis vary.

	Configuration 1 with Torsion Box	Configuration 2 with Torsion Box	Configuration 3 with Torsion Box	Configuration 4 with Torsion Box
Stable	180°	360°	180°	360°
Gross Axle Weight Rating (GAWR), Front	16,000 lbs.	16,000 lbs.	12,000 lbs.	16,000 lbs.
Gross Axle Weight Rating (GAWR), Rear	32,000 lbs.	32,000 lbs.	32,000 lbs.	32,000 lbs.
Wheelbase (WB)	222 inches	222 inches	222 inches	222 inches
Cab to axle/trunnion (CA/CT)	144 inches	144 inches	144 inches	144 inches
Frame Section Modulus (SM) under crane 50,000 PSI or 110,000 PSI	32.0 inch ³ 15.9 inch ³	32.0 inch ³ 15.9 inch ³	32.0 inch ³ 15.9 inch ³	32.0 inch ³ 15.9 inch ³
Frame Section Modulus (SM) over rear stabilizers 50,000 PSI or 110,000 PSI	15.0 inch ³ 13.0 inch ³	15.0 inch ³ 13.0 inch ³	15.0 inch ³ 13.0 inch ³	32.0 inch ³ 15.9 inch ³
Stability Weight, Front	8,600 lbs. minimum	8,600 lbs. minimum	6,800 lbs. minimum	8,500 lbs. minimum HO
Stability Weight, Rear	12,900 lbs. minimum ASH	12,900 lbs. minimum ASH	8,800 lbs. minimum HO	8,100 lbs. minimum HO
Estimated Average Final Weight	38,800 lbs.	38,800 lbs.	34,800 lbs.	35,900 lbs.
NOTES: (1) 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 recommendations. Always specify GAWR when purchasing trucks. (2) Minimum axle requirements may increase with use of longer wheelbase, service bodies, diesel engines or front stabilizers. (3) Tandem axle trucks must be used for hauling larger payloads. (4) Diesel engines require variable speed governor and energize-to-run fuel solenoid for smooth crane operation. (5) Air dryer option on truck is required for continuous rotation machines and recommended for all others. (6) Air bag rear suspension is not acceptable.	<p>81 MIN 144CA MIN STABILIZER 8600LBS MIN* 12,900LBS MIN*</p> <p>180° FULL CAPACITY WORK AREA</p>	<p>STABILIZER 81 MIN 144CA MIN STABILIZER 8600LBS MIN* 12,900LBS MIN*</p> <p>360° FULL CAPACITY WORK AREA</p>	<p>81 MIN 144CA MIN DOWN-AND-OUT STABILIZER 6800LBS MIN* 8800LBS MIN*</p> <p>180° FULL CAPACITY WORK AREA</p>	<p>81 MIN 144CA MIN 75 8500LBS MIN* 8100LBS MIN*</p> <p>360° FULL CAPACITY WORK AREA FRONT OVERFRAMES</p>

*Estimated axle scale weights prior to installation of crane, stabilizers, and subbase if required for 85% stability.

National Series 800B Accessories

Every Series 800B is part of the National Lifting System, a select choice of accessories that add versatility to your crane. With National accessories you can tailor your crane to handle your specific job requirements. In many instances, a truck-mounted crane equipped with accessories can eliminate your need for other specialized equipment.

Because your 800B affords such versatility, you save time, money, and manpower. You can do more, faster, with less equipment. National accessories are, thus, cost-efficient options.

Note:

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 and/or certain boom/jib combinations.

Capacity Alert System

National offers two capacity alert options. The audible-visual capacity alert system is designed to alert the operator when he reaches a maximum capacity condition on the crane structure. This system activates the truck horn when the capacity load is exceeded on the main boom.

The hydraulic capacity alert system is a hydraulically operated, maximum capacity sensing device that is designed to stop all of the normal crane functions that cause overload when maximum capacity is exceeded on the main boom. Neither of these systems is applicable to jib and stability capacities.

Model AAS

(Audible capacity alert system)

Model HAS

(Hydraulic capacity alert system)

Remote Control

National offers one-hand remote control for your Series 800B. Ideal for use where precise control and total load visibility are required.

Fine metering and instant response mean operators can position loads or work platforms easily.

National's remote controls are built with solid state circuitry and few working parts. They are designed for reliability. You will be impressed with the high operating speeds and modular design.

Available in two models: R4 with tilt, turn, telescope and winch functions, and R3 with tilt, turn, and telescope only. R3 should be used to control cranes from basket.

A priority control valve, operated by a trigger on the remote control unit, regulates oil flow and gives you fingertip speed control over all crane functions.

National's remote control is the lightweight, easy-to-use way to add extra versatility to your crane. Consult your dealer or the factory for availability.

Model R3

Tilt, turn and telescope

Model R4

Tilt, turn, telescope and winch



Hydraulic Oil Cooler

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

Model HOC

One Person Basket

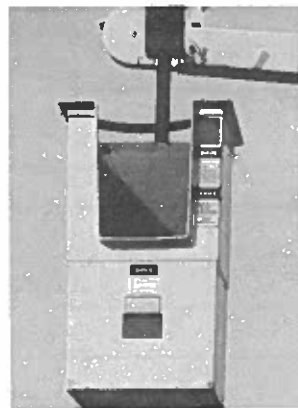
Strong, lightweight fiberglass basket with 300-pound capacity puts personnel where you want them for tough maintenance and installation jobs. Optional dual basket bracket for two-basket operation on main boom.

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 — 1,110 pounds

Model B1 Model B1-L

With lock



Personnel Platform

This extra strength 3 x 6-foot steel platform will carry up to 1,000 pounds and operate at working heights up to 90 feet. It is hydraulically self-leveling and protected by safety valves. Safety belts included. Fold down sides standard.

Optional manual rotator available for precise placement of the platform. Easy-to-operate crank rotates the platform through a dependable chain drive. Continuous rotation. Locks in position.

The personnel platform must not be operated in load rated areas where the load chart shows capacities less than 2,000 pounds on Model SLP and 2,200 pounds on Model SLPR. Can be used with angling jib for additional reach.

Model SLP Model SLPR



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

Can be attached to 13-foot angling jib for additional reach.

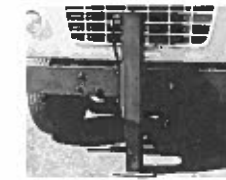


Stabilizers

We offer a complete range of front and rear stabilizers with hydraulic vertical and horizontal motion. All cylinders are fully enclosed for protection against dirt and on-the-job damage.



Rear Mounted
(Model ASH)



Front Mounted
(Model SFO Fixed*)

Stabilizers

Vertical Travel.....	20"	25"
Ground Penetration (38" Frame Height).....	8"	13"
Operation.....	All-Hydraulic	All-Hydraulic
Span.....	10'	8'
Controls.....	All stabilizers noted above can be operated from either control station	

Cross-frame Outriggers

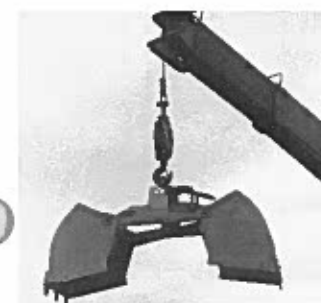
Extended Span.....	15'6"
Retracted Span.....	7'11"
Vertical Travel	
Over-Frame.....	25"
Under-Frame.....	18"
Ground Penetration (38" Frame Height).....	10"
Mounting Space	
Crane/Operator.....	60"
Outrigger Only.....	24"
Mounting.....	Behind cab or at rear of chassis or both

Model 8HO

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 2/3 cubic yard of loose materials with each bite. Hooks easily to loadline, comes with 50 feet of hydraulic hose on automatic reel and quick-connect fittings. Extension hoses are required for use with jibs. Just position the load where you want it and open the bucket.

Model LMC



Hydraulic Tilting Pole Grab

This hydraulic tilting pole grab is the ideal companion accessory for your National self-stowing auger. It attaches to the end of the third boom section to steady poles and makes setting them faster and easier.

The pole grab will grip poles from 7 to 20 inches in diameter and tilts from 45° to 70° for precise placement. Tilt and grab functions are controlled by separate controls operating separate hydraulic cylinders. The unit pins easily and quickly in place. Comes complete with all controls, hoses, and hose feeder assembly. PG



Two-Speed Self-Stowing Auger

Our 2-speed hydraulic auger (available in 8,000- or 12,000-ft./lb. options) locks onto the outer end of your second boom, giving you digging depths up to 12 ft. in a 38 ft. radius. When stowed, the unit locks to the first boom section, freeing the second and third for other work. speed/low torque or low speed/high torque digging. Selection of the proper mode for soil and digging conditions is easy and flightings are available up to 36 inches. All feed lines are fully protected and designed to work without kinking, twists or tension.



Pallet Fork

Turns your Series 800B into a versatile, payload-packing fork lift. Great for delivering palletized material right where you want it. 4,400 lbs. (1,996kg) capacity with adjustable throat and teeth. Handles most loads with ease.

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

Model MKF

(Manual leveling, adjustable throat)



Three Pump System

This optional pump system provides three separate (or individual) hydraulic circuits for independent operation of winch, swing, and crane functions. The option increases productivity on high-cycle jobs and facilitates the ease of operation.

Caution

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

National Series 800B Specifications

General Construction

Low-alloy, high-tensile, and other steel including T-1, Ex-Ten, Stressproof and Hi-Yield are combined with special low-hydrogen welding techniques wherever advantageous. Standard color: painted National Ivory.

Frame:

Box construction for maximum strength and rigidity.

Turret:

Fabricated rigid structure, well-braced for stability. Line-bored and machined after welding to ensure proper alignment.

Rotation:

375° rotational force 220,000 in./lb. Turret rotation is by hydraulic orbit motor and planetary gearbox driving a pinion. The turret rotates on a ball-bearing race. Spring-applied-hydraulic release brake provides positive, no-drift lateral positioning.

Sub-base:

Unitized box construction designed to increase torsional stiffness and reduce truck frame requirements. Standard sub-base is designed to fit on standard 34" wide truck frame and will accommodate an 18' stringerless bed. Attaches both to truck frame and crane frame. Total depth of sub-base is 10".

Outriggers:

"A" frame box-type, 18' span (center of pad at ground level) move out and down, will not bind when raising or lowering truck. Can be positioned to 9" below ground level on 38" truck frame height.

Tilt:

Double-acting hydraulic cylinder raises and lowers boom; butt-mounted safety holding valve prevents boom falling in event of hose failure. Heavy duty, long-life pivot bearings.

Boom:

Boxed construction; telescopes hydraulically in sequence under rated load on nylon plates impregnated with molybdenum disulfide for smooth, long-life operation. Boom cylinder and valves are easily serviced. Heavy-duty, long-life pivot bearings.

Winch:

Hydraulic gear motor with planetary gear reduction brake and counterbalance valve for "power down" load lowering. 10,200 lbs. bare drum single-line pull available with 220 ft. of $\frac{9}{16}$ inch, 17.5 ton breaking strength loadline. "Burst-of-Speed" control increases payout and pick-up of unloaded cable 60% over normal operating speed.

Pumps:

Two Vickers, high-pressure, high-speed balanced-vane, replaceable cartridge-type, providing 27 gpm to crane functions and 34 gpm to winch.

Cylinders:

Shaft packing: Polyurethane cup type. Shafts: HiYield stress-relieved, chrome-plated. Piston sets: Polyurethane u-cups with glass-reinforced nylon bearings. Cylinder barrels: Microhones tubing and safety check valves.

Valves:

Four-way, spring-centered, spool type with low spool force and extra-fine metering notches. Independent relief valves protect hydraulic circuit against overload. Relief valves set at 3050 psi (3050 psi on winch system). Valves located for improved accessibility and easier service.

Hose:

All high-pressure hose is wire braid reinforced, having a minimum safety factor of 4 to 1.

Operating Speeds

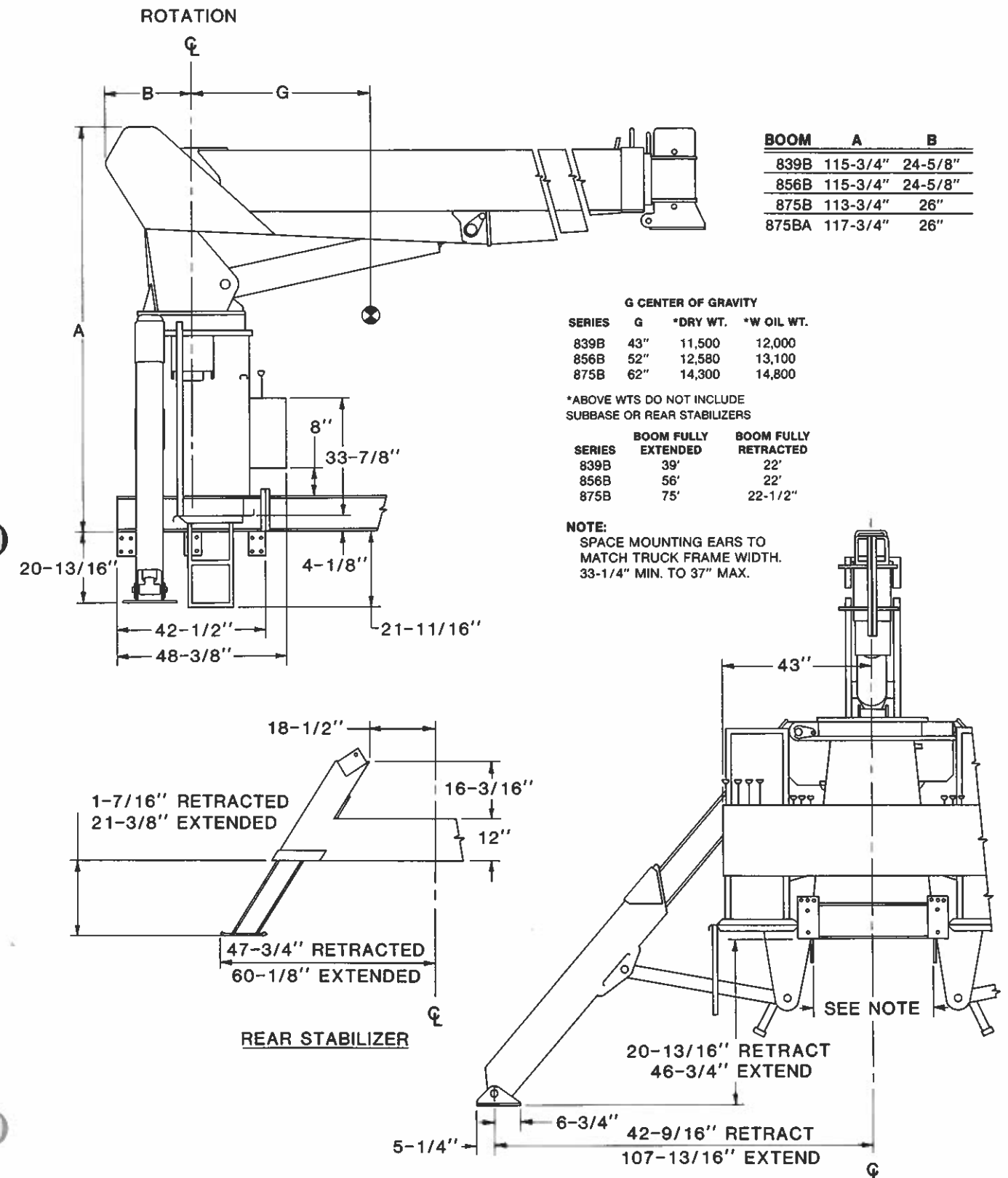
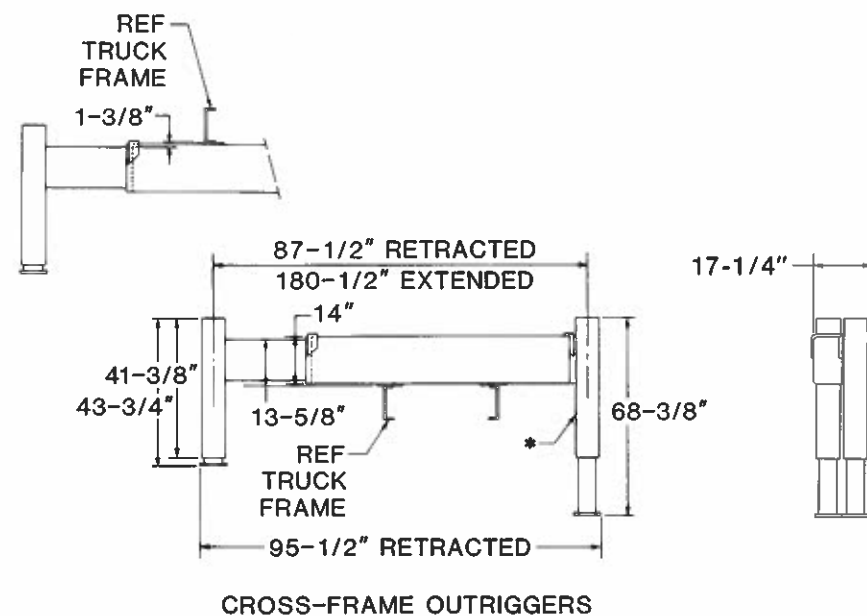
Winch 3rd wrap: 150 fpm. Boom up and down: 22-26 seconds. Boom out: 22 ft. to 56 ft., 70 seconds. Boom in: 56 ft. to 22 ft., 62 seconds. Turn: 32-40 seconds. When using remote control, crane function speeds will be reduced by 40% to assure smooth operation. (Speeds above assume no load with 27 gpm oil flow on boom and 34 gpm on winch.)

Oil Tank Capacities:

60 gallon supply tank with breather, clean-out, suction strainers and removable magnetic plug.

Capacity Alert Systems

Devices available to reduce possibility of operator error. See your dealer.



National Series 800B Proposal

	Description	Price
Date: _____	1. Series _____	\$ _____
Prepared for: _____	2. Boom _____	_____
_____	3. Jib _____	_____
_____	4. Rear Stabilizers <input type="checkbox"/> ASH <input type="checkbox"/> HO	_____
_____	5. Front Stabilizers <input type="checkbox"/> Std. <input type="checkbox"/> Tilt <input type="checkbox"/> SFO	_____
Submitted by: _____	6. Line Block <input type="checkbox"/> 2 Part <input type="checkbox"/> 2/3/4 Part <input type="checkbox"/> 5 Part	_____
_____	Accessories	
(Firm Name) _____	7. _____	_____
_____	8. _____	_____
(Address) _____	9. _____	_____
_____	10. _____	_____
(City & State) _____	Mounting	
(Zip) _____	11. Installation: Behind Cab <input type="checkbox"/> Std. <input type="checkbox"/> Special	_____
(Phone) _____	12. Installation: Rear Mounting (add to installation charge above)	_____
Signed: _____	<input type="checkbox"/> Air Throttle	_____
_____	<input type="checkbox"/> Rear Mounting Hydraulic Group	_____
National reserves the right to change designs, prices, and specifications at any time without notice.	<input type="checkbox"/> High-Tensile Torsion Box	_____
Your National Dealer	<input type="checkbox"/> Reserve Frame Conversion Kit	_____
	<input type="checkbox"/> HO Outriggers	_____
	13. Frame Reinforcement: <input type="checkbox"/> Weld <input type="checkbox"/> Bolt-Extra	_____
	14. Platform Body _____ ft. <input type="checkbox"/> Wood <input type="checkbox"/> Steel	_____
	15. Weight in bed _____ lbs. (if required)	_____
	16. Boom rest: <input type="checkbox"/> Parallel <input type="checkbox"/> Low <input type="checkbox"/> Other	_____
	17. 1,100-lb. front bumper (if required) _____	_____
	18. Mount Stabilizers _____	_____
	19. Chassis _____	_____
	20. Rear Bumper Underride Protection <input type="checkbox"/> Ordered <input type="checkbox"/> No Ordered	_____
	21. Freight _____	_____
	This quotation will remain firm for _____ days.	
	Accepted by: _____	\$ _____
	(Name)	TOTAL PRICE
	_____	_____
	(Firm Name)	(Date)



NATIONAL CRANE

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