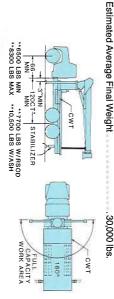
# National Series 600B Truck/Crane Specifications

## **Truck Specifications**

with factory requirements, and a test must be performed to determine actual stability and counterweight requirements since individual truck boxes, rear mounts, etc.). Specifications vary, depending on the configuration utilized. The mounting configuration below is based on an 85% stability factor. The complete unit must be installed in accordance The 600B can be mounted in several configurations, including the one shown below. Your National dealer can provide you with detailed inforchassis vary. mation about alternative configurations (with and without torsion

area is the rear 180° of the vehicle, from outrigger to outrigger. the bed or subbase centered near the crane frame. Full capacity work of counterweight is reduced, increasing the truck's payload. Requires standard subbase, rear ASH stabilizers, and usually counterweight in This configuration allows installation on a tandem rear axle chassis with considerably less frame strength by using the standard subbase. In most cases, the chassis will not require reinforcing and the amount

!	Stability Weight, Rear	Stability Weight, Front	110,000 PSI	Or	50,000 PSI 18.0-inch <sup>3</sup>	Frame Section Modulus (SM) over Rear Stabilizers	Cab to Axle/Trunnion (CA/CT).	Wheelbase (WB)	Gross Axle Weight Rating (GAWR), Rear	Gross Axle Weight Rating (GAWR), Front . 12,000 lbs.	Gross venicle weight Hating (GVVVH)46,000 lbs.
	8,300 lbs. maximum 10,500 lbs. w/ASH stabilizers 7,700 lbs. w/RSOD stabilizers	6,500 lbs. minimum	15.0-inch <sup>3</sup>		18.0-inch <sup>3</sup>		156" on Model 666B*	222" on Model 666B*	34,000 lbs.	12,000 lbs.	46,000 lbs.



### (Model 666B shown)

- \* Shorter WB and CA/CT trucks may be used with shorter boomlength cranes (Models 638B, 647B, and 656B).
- and subbase if required for 85% stability. Estimated axle scale weights prior to installation of crane, stabilizers

- GAWR means Gross Axle Weight Rating and is dependent on all components of the vehicle, such as axles, tires, springs, frame, et meeting manufacturer's recommendations. Always specify GAWR when purchasing trucks.
- Minimum axle requirements may increase with the use of longer wheelbase, service bodies, diesel engines, or front stabilizers.
- Tandem axle trucks must be used for hauling larger payloads.
- Diesel engines require variable speed governor and electric engine

**General Offices:** 11200 North 148th Street / Waverly, NE 68462 Phone: 402-786-6300 / Telex: 438061 / FAX: 402/786-6363

NATIONAL CRANE

### Series 600B Dimensions 25" 222"-86' EXTENDED 0

## **Optional Equipment**

- Remote controls (Models R3, R4)
- Burst-of-speed planetary winch feature for faster, more efficient pay-out and pick-up of cable (Model BOS)
- One-person fiberglass basket (Models B1, B1-L)
- Two-person basket (Model BS-1)
- Personnel platform (Models SLP, SLPR)
- High-performance piston motor winch (Model PMW)
- Pallet fork (Model MKF)
- Loose material clam bucket (Model LMC)
- Hydraulic tilting pole grab (Model PG)
- Rear hydraulic stabilizers with 14-foot span (Model RSOD)
- Front-mounted hydraulic stabilizer (Model SFO)
- Cross frame outriggers with 15½-foot span (Model 6HO)
- Capacity alert systems (Models AAs, HAS)
- Three pump system (Model TP3) Hydraulic oil cooler (Model HOC)

National dealer for details and specific accessory availability. crane must be deducted from the effective lifting capacity Weights of all accessories attached to the boom or loadline of the Some accessories cannot be used in combination with other Do not operate National cranes or accessories within 10 feet of /e power lines or other electrified sources.

## Your National Dealer:

Printed in USA Form No. S600BAC11898M © 1989 National Crane

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

A high-capacity telescoping crane from National, America's truck-mounted hydraulic crane leader

Maximum Capacity: 28,000 Pounds (12.5 Metric Tons) Maximum Height: 118 Feet (36 Meters)



# Why buy a National Series 600B?



advantages: ton capacity; 118-foot vertical crane leader, features the inreach) offers many 600B telescoping crane (14medium-to-heavy-duty **Series** and articulating units. The dustry's premier lineup of truck-mounted hydraulic National Crane, America's hard-working telescoping

# Field-proven durability

- More than 17,000 fieldcranes since 1963. National's manufacturing proven cranes verify
- Nearly 90% of all National cranes ever manufactured are working on the job today.

## Attention to quality

- Each 600B undergoes nu- National's industry leading prototype models to statestructural integrity. of-the-art strain gauge and life-cycle testing to verify testing program subjects all
- and assembly. All mounted at all levels of manufacture to shipment. cranes are fully tested prior merous quality inspections

 Each 600B is backed by strong after-sale and ser-Responsive service value year after year.

Retained market value National cranes traditionally retain higher resale

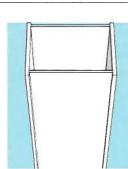
# National has manufactured

### protection Strong warranty

The 600B is backed by a from date of shipment. manship for six months fects in materials and worksolid warranty covering de-

# Efficient boom design

**600B** boom sections. ables National to improve

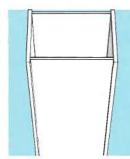


bers welded with perpendicular corners. This "box-section" boom design has high-strength steel memare tabricated from four thicker top and bottom

vice support. National's pro-fessional, factory-trained the nation. dealer network spans

- program for your 600B. maintain a parts stocking **Authorized National dealers**
- provides 24-hour parts shipping in 90% of all breakdown rush orders. factory's back-up program mediately supply a part, the When a dealer cannot im-

Computer-aided design en-



Telescoping boom sections

lower boom weight. increase capacity through and thinner side plates to plates to maximize strength

- Only strong, low-alloy steel
- Welds are made with auto-matic, low-hydrogen techniis used in boom fabrication. seams. ques to ensure strong
- Corner seams are ultraweld penetration. sonically tested for proper
- Large nylon bolt-in wear smooth, long-life operation and are easily replaced lubricants provide a pads impregnated with

### extension Proportional boom

rotation

- Proportional (cable crowd) weight distribution. ularly in normal working radii) through efficient boom higher capacities (partiction extends and retracts imizes efficiency and yields telescoping operation) maxproportionally during the boom extension (each sec-
- The design permits minimum overlap to get the maneuverability. retracted length for most reach with minimum
- The utilization of cable, maintenance. rather than chain, means longer service life and less

The boom extend cylinder

 There are no fitting tubes or since the system utilizes direct mount holding valve. hydraulic maintenance is only one extend cylinder, is fully protected with a hoses inside the boom, and

## Planetary winch

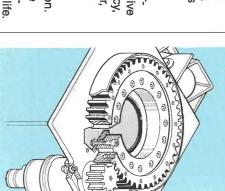
minimized.

- The standard high perfor-Equipped with a special and generates less heat. mance planetary gear drive winch increases efficiency, requires less horsepower
- smooth full-load operation. gerotor motor for extra-
- Anti-friction bearings are mize efficiency and seal life. used throughout to maxi-

- A "Burst-of-Speed" option, pickup of unloaded cable. extra fast payout and 60% over normal, allows increasing line speed up to
- Standard brake and counfine control. terbalance valves provide
- A rotation indicator allows termine that the drum is the operator to readily de-
- The winch cover permits visibility of the drum and rotating.
- Rotation-resistant 9/16" di-

### Positive planetary turret ameter cable is standard.

- The planetary rotation geargearbox. lower crane structure and brake allows the gearbox to loads on the upper and boom, reducing shock side load is applied to the backdrive when excessive box with a hydraulic release
- with extra-heavy bearings below the drive pinion. The The turret drive is designed loads on the bearing. bolt pattern extends the turntable bearing full-circle bearing life due to uniform
- The gearbox and rotation are precision-machined afwear, even under maximum smooth rotation and low sistent tooth alignment for bearing mounting surfaces ter welding to ensure con-



# National Series 600B



- The entire turret glides ball bearing race. smoothly on a low-inertia
- Rotation is 370° noncontinuous rotation machines by gradually slowing the rotation of the boom. sudden stop on nonstop design eliminates the continuous. The rotation
- A turret rotation indicator tioning loads. aids the operator in posi-

# Solid, reliable stability

 Wide 18-foot-span A-frame ground. Large 13" x 16" outout-and-down outriggers eling, even on uneven provide stable, efficient levrigger pads are standard.



 The 600B features holding valves on all cylinders.

The outriggers retract

- Mounting features

Outrigger and stabilizer hy-

draulic power is sufficient to

then in.

under load, first moving up, smoothly, without binding

The 600B can be mounted on selected, single-axle trucks (Model 666B re-

Heavy-duty A-frame (ASH)

hydraulic rear stabilizers

level a fully loaded truck.

hind operator) permits oc-casional 360° working area National's unique "tab-and" quires a tandem-axle truck)

The outrigger location (be-

span are standard. with an extended 10-foot

- acting independently. controlled by two cylinders
- A precision-mounted level station aids the operator in indicator at each control the set-up procedure leveling the **600B** during

## Protection features

 A standard anti-two-block case, either by winching up the winch cable or attachby two-blocking (i.e., when out paying out the winch or extending the boom withside of the boom sheave vent cable damage caused sensory device helps prements contact the under-



- Seven standard mounting configurations are available
- slot" shear plate mounting

- ing the crane. a simple method of mountis exceptionally strong, yet
- A subbase is available to counterweight. eliminate truck reinforcing and, in some cases,

### downtime Easy service, low

- Boom access holes enlow viewing of the extension nance serviceability and al-
- The 600B frame allows serviceability. externally for improved minor adjustments and fit-ting tightening. Oil and con valves and plumbing for trol valves are located easy access to control
- The complete console is easily removable for major repair.
- The simplicity of the boom disassembly. design permits fast

# **Dual operator stations**

- Standard dual operator stasame hand). tne same control with the trols in a SAE orientation of unctions (you always work tions feature identical con-
- Extra-fine metering and low spool forces allow smooth precise control.
- Control rods supported by operation. smooth, low-maintenance nylon bearings permit
- Dual stations and convenexcellent load visibility. provide the operator with ent platform positioning



Optional hydraulic rear out-

and-down stabilizers with a

when mounted on a recom-

without front stabilizers

mended truck.

stability with less

14-foot span provide

out sticking or binding.

lower a loaded truck with-

designed to lift, level and counterweight and are

Horizontal extension is con-

trolled by one cylinder; the

vertical-down motion is

- Labeled control knobs identify the function of each
- control functions.
- each station. switches are located at
- tor showing the boom angle reading of the angle indicapositioned to allow easy

### Compact design

- ample space for payload.
- The operator platforms are designed with open-mesh mize dirt and mud buildup. expanded metal to mini-

666B: 25' to 66' three section

656B: 21'8" to 56' three section

656B: 21'8" to 56' three section

6FJ21: 21' straight

6FJ35M: 21' to 35' manual pull-out

6FJ25: 25' straight

656B: 21'-8" to 56' three section

647B: 18'-8" to 47' three section

6FJ29M: 18' to 29' manual pull-out

6FJ18: 18' straight

647B: 18'-8" to 47' three section

647B: 18'-8" to 47' three section

638B: 15'8" to 38' three section

6FJ23M: 15' to 23' manual pull-out

 A standard high-pressure, operation capability. other crane functions, prosimultaneous operation. provides for a smooth, fast, replaceable tandem pump víding an independent The winch is isolated from high-speed balanced vane

> 110-120

130

SERIES 666B 42FT JIB

(Metric equivalents shown in parentheses)

666B Capacity\*

Booms Retracted

Extended 46 Feet

666B: 25' to 66' three section

666B; 25' 66' three section

100-

 Control valve spools are and maximum load-holding corrosion. All spools are selected hone-fitted for ability. minimum internal leakage long life and resistance to nard, chrome-plated for

HEIGHT IN FEET

80 90

 The aluminized hydraulic gathering of rust in the system, keeping the reservoir prevents the

## Versatile accessories

- following chart) allows you to tailor your **600B** to your combinations (see the
- A comprehensive accessory line (see backside of this brochure) adds to the

# **Boom and Jib Combinations** 638B: 15'8" to 38' three section

National Series 600B

ooms and Jibs

 A system pressure gauge monitor pressures on all enables the operator to

638B: 15'8" to 38' three section

6FJ16:

15' straight

- Each station is equipped with foot throttles controlling the engine speed.
- Kill and audible warning
- The operator's stations are during crane operation.

- The 600B fits into just 46½" of bed space, leaving

### system Heavy-duty hydraulic

- hydraulic oil clean.

A selection of boom/jib job requirements.

Do not operate cranes or

and mounted in a factory-recommended configuration.

Overloading the crane may cause structural collapse or instability.

Weights of any accessories

RADIUS IN FEET ò

a

accessories within 10 feet of

live power lines.

The operator must reduce

loads to allow for such

factors as

Always level the crane with the level indicator on the crane frame.

wind, ground conditions, operat-

ing speeds and the effect of

6. Do not exceed jib capac any reduced boom length.

chart capacities.

reely suspended loads.

ersatility of your **600B** 

surface and the crane leveled loads with the outriggers properly extended on a firm, level charts are maximum allowable 1 Load ratings shown on these

# 600B Buyer's Guide

6FJ42M: 25' to 42' manual pull-out.

All Booms Extended Maximum **Buyer's Guide**, a 20-page booklet with detailed infor-Contact your National dealer for a Series 600B telescoping cranes, ncluding: mation about Series 600B

 Winch data information Series 600B models

Load rating charts for all

Maximum
Capacity
9' (2.7m) 11
12' (3.7m) 11
12' (3.7m) 11
16' (4.9m) 11
20' (4.9m) 12
20' (4.5m)
20' (4.5m)
20' (4.5m)
20' (4.5m)
20' (4.5m)
20' (4.5m)
40' (12.2m)
40' (12.2m)
40' (12.3m)
40' (12.3m)
40' (12.3m)
40' (13.3m)
50' (18.3m)
56' (18.3m)

- Truck requirements
   Series 600B specifi-
- Options and accessories
- accessories are attached The capacities shown will be reduced when

to the boom or loadline.

1,850 lbs. ( 839kg.) 1,500 lbs. | 680kg.)

