**TOWN OF LINCOLN**
**INVITATION TO BID**
**2015 MACK GU 713 WITH PAK-MOR R-330-B REFUSE, REAR LOADER**
**ON/OFF HIGHWAY STRAIGHT TRUCK WITHOUT TRAILER**
**RFP #2014-08**

**Sealed bids are due at 10:00am on Monday, January 13, 2014**

Bid Specs are available online at:
www.lincolnri.org/departments/purchasing.asp
or can be picked up at:
Lincoln Town Hall
100 Old River Road
Lincoln, RI 02865
Hours 8:30 am – 4:30 pm

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# INVITATION TO BID
# 2015 MACK GU 713 WITH PAK-MOR R-330-B REFUSE, REAR LOADER ON/OFF HIGHWAY STRAIGHT TRUCK WITHOUT TRAILER
# RFP #2014-08

The Town of Lincoln, RI invites sealed bids from qualified companies for a 2015 MACK GU 713 with PAK-MOR R-330-B REFUSE, REAR LOADER ON/OFF HIGHWAY STRAIGHT TRUCK WITHOUT TRAILER.

Sealed bids will be received by the Purchasing Agent until **10:00 a.m. on Monday, January 13, 2014,** at which time they will be opened publicly and read in the Town of Lincoln Council Chambers at 100 Old River Road, Lincoln, RI.

The invitation to bid will be available online at www.lincolnri.org/departments/purchasing.asp or at the Purchasing Office, Lincoln Town Hall, 100 Old River Road, Lincoln, RI 02865 between the hours of 8:30 a.m. and 4:30 p.m. Two (2) copies of the submitted bids are to be placed in a sealed envelope and clearly marked **2015 MACK GU 713 WITH PAK-MOR R-330-B REFUSE, REAR LOADER ON/OFF HIGHWAY STRAIGHT TRUCK WITHOUT TRAILER** and be addressed to John Ward, Finance Director, c/o Town of Lincoln, 100 Old River Road, P.O. Box 100, Lincoln, RI 02865. No proposals will be accepted after the date and time specified. The Town of Lincoln reserves the right to accept or reject, without prejudice, any or all proposals or to waive any irregularities therein, or to accept the proposal deemed to be in the best interest of the town of Lincoln. Individuals requesting interpreter service for the hearing impaired must request such service 72 hours in advance of this scheduled opening.

John Ward – Finance Director
Town of Lincoln, RI

**TOWN OF LINCOLN**
**100 OLD RIVER ROAD**
**PO BOX 100**
**LINCOLN, RI 02865**

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# 2015 MACK GU 713 WITH PAK-MOR R-330-B REFUSE, REAR LOADER ON/OFF HIGHWAY STRAIGHT TRUCK WITHOUT TRAILER
# RFP #2014-08

**BID OPENING DATE:** **MONDAY, JANUARY 13, 2014**

**TIME:** **10:00 AM**

**LOCATION:** TOWN OF LINCOLN
100 OLD RIVER ROAD
LINCOLN, RI 02865

**PRESENT BIDS TO:** JOHN WARD, FINANCE DIRECTOR
TOWN OF LINCOLN
100 OLD RIVER ROAD
P.O. BOX 100
LINCOLN, RI 02865

**BID FORMS AND SPECIFICATIONS MAY BE OBTAINED ONLINE AT WWW.LINCOLNRI.ORG/DEPARTMENTS/PURCHASING.ASP OR FROM THE PURCHASING AGENT IN THE FINANCE OFFICE AT THE LINCOLN TOWN HALL, 100 OLD RIVER ROAD, LINCOLN RI, BETWEEN THE HOURS OF 8:30 A.M. AND 4:30 P.M. WEEKDAYS.**

**ANYONE PICKING UP OR DOWNLOADING THE BID PACKET MUST SEND AN EMAIL TO PWEIGNER@LINCOLNRI.ORG WITH THEIR CONTACT INFORMATION IN ORDER TO RECEIVE ANY ADDENDA.**

**QUESTIONS MAY BE EMAILED TO PWEIGNER@LINCOLNRI.ORG BY END OF DAY ON FRIDAY, JANUARY 3, 2014. QUESTIONS WILL BE ANSWERED AND EMAILED TO ALL BIDDERS BY END OF DAY ON MONDAY, JANUARY 6, 2014.**

# TOWN OF LINCOLN GENERAL SPECIFICATIONS

1. SUBMITTAL

Sealed bids (proposals) will be accepted in the office of the Finance Director, Town Hall, Lincoln, Rhode Island, until the time indicated on the attached advertisement for bids, for the commodities, equipment or services listed in the specifications; and will be then publicly opened and read at the prescribed time in the Town Hall Council Chambers.

2. FORM OF BID

Proposals shall be submitted on the bid form provided within the invitation to bid package. The bidder is to copy the form, fill it out, and submit it in duplicate.

3. SUBMISSION OF BIDS

a) Envelopes containing bids must be sealed and addressed to the Finance Director, Lincoln Town Hall, 100 Old River Road, P.O. Box 100, Lincoln, RI 02865 and must be marked with the name and address of the bidder, date and hour of opening, and name of item in bid call.

b) The Purchasing Agent will decide when the specified time has arrived to open bids, and no bid received thereafter will be considered.

c) Any bidder may withdraw his bid by written request at any time prior to the advertised time for opening. Telephone bids, amendments, or withdrawals will not be accepted.

d) Unless otherwise specified, no bid may be withdrawn for a period of thirty (30) days from time of bid opening.

e) Negligence on the part of the bidder in preparing the bid confers no rights for the withdrawal of the bid after it has been opened.

f) Proposals received prior to the time opening will be securely kept, unopened. No responsibility will be attached to an officer or person for the premature opening of a proposal not properly addressed and identified.

g) Any deviation from the specifications must be noted in writing and attached as part of the bid proposal. The bidder shall indicate the item or part with the deviation and indicate how the bid will deviate from specifications.

4. RHODE ISLAND SALES TAX

The Town is exempt from the payment of the Rhode Island Sales Tax under the 1956 General Laws of the State of Rhode Island, 44-18-30, Paragraph 1, as amended.

5. FEDERAL EXCISE TAXES

The Town is exempt from the payment of any excise tax or federal transportation taxes. The price bid must be exclusive of taxes and will be so construed.

6. QUALIFICATION OF BIDDERS

The Town may make such investigations as it deems necessary to determine the ability of the bidder to perform the work. The bidder shall furnish the Town with all such information and date for the purpose as may be requested.

7. ADDENDA AND INTERPRETATIONS

**No interpretation on the meaning of the Contract Document will be made to any bidder orally. Every request for such interpretations should be in writing, addressed to Peggy Weigner (emailed to pweigner@lincolnri.org) by end of day on Friday, January 3, 2014. Any and all interpretations, and supplemental instructions which, if issued, will be emailed to all perspective bidders (at the respective email address furnished by the bidder for such purpose), not later than end of day on Monday, January 6, 2014.** Failure of bidder to receive any such addendum or interpretations shall not relieve any bidder from obligation under his bid as submitted. All addenda so issued shall become part of the Contract Document.

8. DELIVERY

All bids are to be **F**rom **O**rigin of **B**usiness to various locations within the Town of Lincoln, delivery to be supplied with the Purchase Order. No extra charges for delivery, handling or other services will be honored. Only inside delivery and set-up, where required, will be accepted. TAILGATE DELIVERIES WILL BE REFUSED. The vendor must notify the Town of Lincoln 24 hours prior to delivery. All claims for damage in transit shall be the responsibility of the successful bidder. The Town will not make payment on damaged goods, they must be replaced or adjustments made at the option of the Town. The Town of Lincoln is only represented by the Finance Director in these matters and that division, or its appointed representative or agent, shall be the only entity to negotiate any settlements. Deliveries must be made during normal working hours.

Bid price, where applicable, is to include the cost of uncrating and setting in place. Bid price, where applicable, is to include installation.

# NOTICE TO VENDORS

1. Contracts shall be awarded by the Town Council to the lowest responsible bidder. In determining "lowest responsible bidder", in addition to price, the Town Council may consider:

    - The ability, capacity and skill of the bidder to perform the contract or provide the service required;
    - Whether the bidder can perform the contract or provide the service promptly or within the time specified without delay or interference;
    - The character, integrity, reputation, judgment, experience and efficiency of the bidder;
    - The quality of performance of previous contracts or services;
    - Previous and existing compliance by the bidder with laws and ordinances relating to the contract or service;
    - The sufficiency of the financial resources and ability of the bidder to perform the contract or provide the service;
    - The quality, availability and adaptability of the supplies or contractual services to the particular use required;
    - The ability of the bidder to provide future maintenance and service for the use of the subject contract;
    - The number and scope of conditions attached to the bid.

2. No proposal will be accepted if made in collusion with any other bidder.

3. A bidder who is an out-of-state corporation shall qualify or register to transact business in this State, in accordance with RI General Laws (as amended), Sections 7-1.1-99, 7-1.1-105, and 7-1.1-106.

4. The Town of Lincoln reserves the right to reject any and all bid(s).

5. In determining the lowest responsible bidder, cash discounts for payment less than thirty (30) days will not be considered.

6. Where prices are the same, the Town of Lincoln reserves the right to award to one bidder, or to split the award.

7. Competitive prices may be obtained by all bidders attending formal bid opening. After a reasonable lapse of time, tabulation bids may be seen by applying in person at the Finance Department. Telephone or written requests for the above will not be honored.

8. As the Town of Lincoln is exempt from the payment of Federal Excise Taxes and Rhode Island Sales Tax, prices quoted are not to include these taxes.

9. In case of error in the extension of prices quoted, the unit price will govern.

10. The contractor will not be permitted to either assign or underlet the contract nor assign either legally or equitably any monies hereunder, or its claim thereto without the previous written consent of the Finance Director.

11. Delivery dates must be shown in your bid. If no delivery date is specified, it will be assumed that an immediate delivery from stock will be made.

12. A certificate of insurance shall be required of a successful vendor.

**13. Bids may be submitted on an "approved equal" in quality basis. We reserve the right to decide equality. Bidders must indicate brand or the make being offered and submit detailed specifications if other than brand requested with submission of the bid and in accordance with applicable technical specifications.**

14. All vendors doing business within the Town are subject to the requirements as stated in the code of Ethics as established by the Town Ordinance No. 92-15 (9/22/92).

15. For contracts involving construction, alteration and/or repair work, the provisions of State Labor Laws concerning payment of prevailing wage rates apply. (See RI General Laws Section 37-13-1 et seq., as amended).

16. No goods should be delivered or work started without a Purchase Order.

17. The Town requests that you submit one original and one copy of your bid.

18. Compensation to the contractor for professional services shall be based upon and measured by the following elements which are set forth below:

- The successful bidder will submit to the Town of Lincoln an invoice for each completed project no later than the 2nd week of every month. This invoice will then be added to the Town Council agenda; the council meeting is the 3rd Tuesday of every month. Following the review and acceptance of the Invoice by the Town Council, a payment will be made to the Contractor within 30 days.

- Additional Work. If, during the performance of this Agreement, other or additional services are required for this contract, the Town may order the Contractor to perform such additional services, payment to the Contractor for the same shall be as provided above. In order to be eligible for payment for additional services, Contractor must receive, prior to commencement of work, authorization from the Town of Lincoln.

- Abandonment of Project. If the Town of Lincoln shall at any time during the performance of this Agreement, deem it necessary for the Town to abandon or involuntarily defer the work under this Agreement, the Contractor shall be entitled to compensation for any work uncompensated, work performed prior to such time. Or compensation shall be withheld if the Town deems the work performed of poor quality.

- Termination. In the event that either party shall default in its obligations to perform in accordance with this Agreement, the other party may demand, in writing to terminate this Agreement by giving 48 hours written notice.

**END OF SECTION**

**BID PROPOSAL**

TO: JOHN WARD, FINANCE DIRECTOR
TOWN OF LINCOLN
100 OLD RIVER ROAD
P.O. BOX 100
LINCOLN, RI 02865

WE, THE UNDERSIGNED, PROPOSE TO FURNISH THE FOLLOWING PER ATTACHED SPECIFICATIONS FOR THE PRICE(S) STATED BELOW:

**2015 MACK GU 713 WITH PAK-MOR R-330-B REFUSE, REAR LOADER ON/OFF HIGHWAY STRAIGHT TRUCK WITHOUT TRAILER**

PRICE IN FIGURES: _____

PRICE IN WORDS: _____

DELIVERY: _____

ACKNOWLEDGEMENT OF ADDENDA: _____

DID YOU DEVIATE FROM THE SPECIFICATIONS IN ANY WAY: __YES __NO
(IF YES, YOU MUST SUBMIT DETAILED DESCRIPTIONS OF ALL DEVIATIONS)

BY: _____ _____
(SIGNATURE) (COMPANY NAME)

_____ _____
(PRINT NAME AND TITLE) (ADDRESS)

_____ _____
(DATE) (TELEPHONE)

## 2015 MODEL YEAR MACK GU713 WITH PAK-MOR 30 YARD REAR LOAD BODY_

### A. Dimensions/G.V.W

- GVW rating – 71,680#
- Wheelbase – 275”
- CA – 188” clear, must be verified with the body installer
- Platform – 262” LP, 74”AF , verify with bodybuilder

### B. Frames/Frame equipment

- Double rail, full inside channel, RBM- 3,920,000 in. lbs. per rail
- 6” bolt-on frame extension
- HD I-beam crossmembers
- Bright finish swept back steel bumper
- Bright finish radiator guard, plate type
- Front tow hooks

### C. Engine Diesel/Engine Equipment

- Minimum 11 Liter 365 HP at 1500-1900 RPM , 1340 lb ft torque
- Engine to utilize current SCR emission technology
- Alternator – Delco 12V 130 amp
- Batteries – (3) 12V 650/1950 CCA
- Engine block heater 120 volt/1500 watt includes block heater socket receptacle
- Fuel water separator w/manual drain valve
- Air compressor, 18.7 cfm
- Bug screen, radiator mtd
- Engine hoses and tubing, silicone
- DPF and SCR mounted RH side under cab
- Exhaust after-treatment system, diesel particulate filter ceramic passive regen
- Oil pan – corrosion resistant
- Engine compression brake with selector switch
- Exhaust, single RH vertical stack, cab mtd, turned end
- Bright finish heat shield, stack, and SCR cover

### D. Transmission and Equipment/Drivelines/Clutch

- Allison 4500-RDS-6
- Transynd Synthetic lube
- Driveline – Main, Meritor 18 MXL “XTENDED LUBE”
- Driveline – Interaxle, Meritor 17 MXL “XTENDED LUBE”

### E. Axles

- Front axle – I-Beam type 18,000 lbs. Capacity
- Steering – Sheppard SD110

- Rear axle- 58,000# capacity, cast ductile iron housing, dual reduction w/ratio capable of 70 mph
- Automatic power divider

**F. Suspension**

- Front, HD multi-leaf, shackle type, 18,000 lb. capacity
- Rear, 58,000# multi-leaf, to articulate w/bronze center bushing
- 54" rear axle spacing

**G. Brakes**

- Front-S-cam 16.5" x 6" Q+
- Rear-S-cam 18"x 7"
- Brake system to include:

  - Air dryer
  - Brake chambers, type 30/30 rear
  - Dust shields front and rear
  - Brake lines color-coded nylon
  - Slack adjusters automatic front and rear
  - Anti-lock brake system with traction control
  - Hand control valve

**H. Tires**

- Front (2) 12R24.5 16H Bridgestone M843
- Rear (8) 12R24.5 16H Bridgestone M843

**I. Wheels**

- Front- Cast spoke, (2) 24.5 x 8.25 rims
- Rear- Cast spoke, (8) 24.5 x 8.25 rims

**J. Electrical System**

- Twelve-volt negative ground electrical system consisting of the following components:
  - Wiring schematic shall be supplied illustrating the wiring system
  - Battery box mounting – RH under cab
  - "Bodylink" III w/cab pass-thru

**K. Fuel System**

- Fuel tank - LH, 66 gallon aluminum D-shaped
- Aluminum fuel tank steps/stainless straps

- 6.6 gallon DEF tank integrated w/fuel tank

**L. Cab Exterior**

- Conventional Cab, air suspended (welded steel galvanized shell) to include rust preventative procedures
- Approx. 116" BBC (front of flush bumper to back of cab), engine to sit front of firewall Hood and fenders, fiberglass
- Identification/clearance lights (5) LED chrome bullet type
- Mirrors, heated stainless exterior west coast RH and LH
- LH and RH 8.0" convex fender mtd mirrors
- Convex spot mirrors heated mtd below west coast mirrrors
- Two single air horn, one each side of cab roof
- Stainless steel exterior sun visor
- Bright finish grill bars with bright finish grill surround

**M. Cab Interior**

- Steering wheel, tilt/telescopic
- Header console mtd Red Dot fan w/metal guard
- Two extra dash mtd lighted toggle switches
- Floor covering rubber, black
- Gauge package to include exhaust pyrometer, air restriction monitor, hour meter, engine oil temp., and transmission oil temp.
- PTO – control, switch and light w/wiring and piping factory installed
- Dash mtd shifter
- Seat driver, Bostrom Talledaga 915 air suspension (Hi-Back)
- Passenger seat, two man extended
- Am/Fm Cd w/weatherband

**N. Paint**

- Cab – Red, Urethane w/clear coat, chassis black Urethane
- Spokes black, rims - Gray

**O. Accessories**

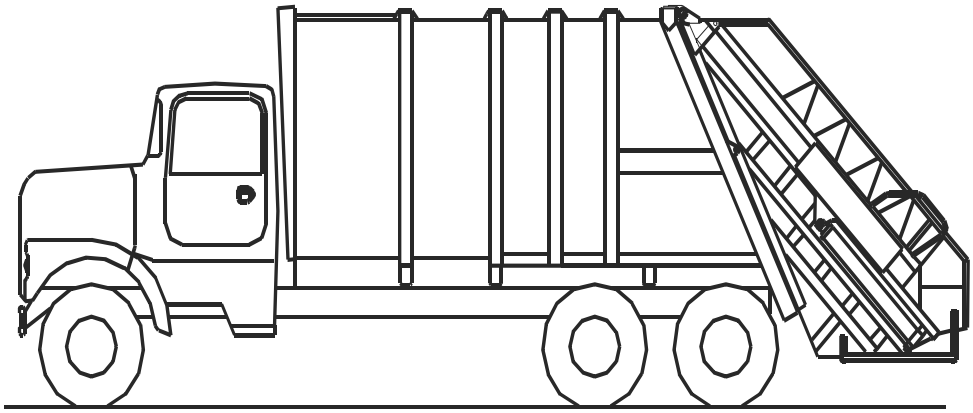
- Two wheel chocks
- Fire extinguisher - #5 ABC
- Three safety triangles

**P. Warranties**

- Engine – Premium coverage 84 months/150,000 miles, 100% parts and labor, includes turbo and injectors

- Engine after-treatment system and engine sensors/EA harnesses – 84 months/150,000 miles, 100% parts and labor
- Chassis coverage (extension of standard 1 year warranty) – 60 months/150,000 miles, 100% parts and labor
- Allison Transmission – 60 months, 100% parts and labor
- Towing for warrantable engine claims – 60 months/100,000 miles
- Towing for warrantable chassis claims – 24 months/50,000 miles

**P.O. Box 389, Seguin, TX 78156**
**2191 Rudeloff Road, Seguin, TX 78155**
**Office Number: (830) 303-7256 - Fax Number: (830) 303-3648**



# RECOMMENDED SPECIFICATIONS FOR PAK-MOR R330B "LOADLINER" REAR LOADER REFUSE COLLECTION BODY

**Scope**: It is the intent of this specification to describe a hydraulically actuated refuse packer body with the following minimum specifications considered necessary to perform the work assigned and will be the product of a manufacturer actively engaged in the production of refuse collection equipment and will embody their latest improvements in design and construction. The body's construction and specifications shall be in compliance with the applicable standards as promulgated by the American National Standards Institute (ANSI Z245.1).

## I. GENERAL

The body shall be of a rectangular box form, and shall be mounted in a stationary manner that does not require the body to be tilted in order to discharge refuse. The body shall be of a design such that no cutting, welding, and/or material modification of a standard chassis frame forward of the rear axle(s) is required to mount the body. The body shall be equipped with a hydraulically actuated rear-loading tailgate. The body shall be capable of handling brush and trimming collection in addition to residential and commercial refuse collection.

## II. BODY

A. Capacity: The body shall have a minimum capacity of _____ (R330B – 30) cubic yards. The capacity of the body shall be determined without regard to the capacity of the hopper of the tailgate.

B. Dimensions:

1. Inside Width: The body shall have an inside width of 89 inches.

2. Inside Height: The body shall have an inside height of 79 inches.

3. Width: The body shall have an overall width of 96 inches.

4. Length: The body shall have an overall length, inclusive of the body front ejection cylinder clevis beam and the tailgate (in lowered position) of ____(R330B – 311) inches.

5. Height: The body shall have an overall height, exclusive of hydraulic lines, clamps, optional accessories, etc. of 94 inches measured from the top of the frame of the chassis.

6. Weight: The body shall have an overall weight, inclusive of the tailgate, of _____ (R330B - 15,100) pounds.

C. Construction:

1. Sidewalls:

a. General: The body sidewalls shall be constructed from 11 gauge high tensile steel reinforced with _____ (R330B – 5) vertical formed channel braces, exclusive of the body rear corner posts, constructed from 12 gauge high tensile steel. The rearmost sidewall sheets shall be reinforced additionally with 1 horizontal formed channel brace constructed from 12 gauge high tensile steel. The sidewall sheets shall be joined by continuous seam welds. The braces shall be joined to the sidewalls by continuous seam welds.

b. Rear Body Reinforcement (Optional): The rearmost sidewall sheets shall be reinforced additionally with a second formed channel brace constructed from 12 gauge high tensile steel. The brace shall be joined to the sidewall sheet by continuous seam welds.

2. Floor:

a. Upper Floor: The upper floor shall be constructed from 10 gauge high tensile steel reinforced with _____ (R330B - 5) lateral formed crossmembers, exclusive of the body rear apron and the body front

bulkhead, constructed from 10 gauge high tensile steel. The rearmost upper floor shall be reinforced additionally by 2 rows of linear braces constructed from 2 x 2 x 1/4 inch steel structural angle.

b. Trough:

i. Trough Floor: The trough floor shall be constructed from 3/16 inch high tensile steel.

ii. Ejection Panel Guides: The trough shall be equipped with 2 ejection panel guides constructed from 6 inch steel structural channel. The guides shall extend the full length of the body located in the trough of the body floor.

3. Roof: The body roof shall be constructed from 11-gauge high tensile steel reinforced with _____ (R330B - 5) lateral formed channel braces, exclusive of the body rear hinge beam, constructed from 12 gauge high tensile steel. The roof sheets shall be joined by continuous seam welds. The braces shall be joined to the roof by continuous seam welds.

4. Body Front Bulkhead: The body front bulkhead shall be constructed from 10 gauge high tensile steel.

5. Body Front Ejection Cylinder Clevis Beam: The body front ejection cylinder clevis beam shall be constructed from 1/4 inch high tensile steel.

6. Body Rear Corner Posts: The body rear corner posts shall be constructed from 3 x 6 x 3/8 inch high tensile steel structural tubing. The posts shall be joined to the body sidewalls by continuous seam welds.

7. Body Rear Apron: The body rear apron shall be constructed from 1/4 inch high tensile steel reinforced with braces constructed from 1/4 inch high tensile steel. The apron shall be joined to the body floor and the body rear posts by continuous seam welds.

8. Body Rear Hinge Beam: The body rear hinge beam shall be constructed from 4 x 6 x 3/8 inch high tensile steel structural tubing. The beam shall be joined to the body roof by continuous seam welds.

## III. TAILGATE

A. General: The tailgate shall be mounted on the rear of the body. The tailgate shall rotate on 2 hinges located on the upper perimeter of the tailgate equipped with replaceable pins. The tailgate shall be raised by 2 hydraulic cylinders (see also V B). The lower inside perimeter of the tailgate shall be equipped with a replaceable, watertight seal. The tailgate shall be comprised of 2 principal components hereinafter described as a tailgate shell and a packing mechanism.

B. Hopper Capacity:

1. Hopper Capacity With Container Handling Device): The hopper of the tailgate shall have a capacity (inclusive of hopper loading sill spill plate) of 3.3 cubic yards measured by NSWMA (TBEA) rating formula.

C. Dimensions:

1. Hopper Loading Sill Height:

Hopper with Container Handling: The hopper-loading sill shall have a height 1 inch lower than the top of the frame of the chassis.

2. Hopper Inside Width: The hopper shall have an inside width of 78 inches.

3. Hopper Opening Height: The hopper opening shall have a height of 67 inches.

4. Tailgate Overhang Length: The tailgate shall have an overhang length of 74 inches measured from the end of the body floor to the end of the hopper loading sill.

D. Tailgate Shell:

1. General: The tailgate shell shall be comprised of 2 principal components, hereinafter described as an upper half and a lower half. The tailgate shell shall be constructed such that the upper half can be raised separately from the lower half. The upper half shall rotate on 2 hinges, joining it to the lower half, located on the upper perimeter of the upper half equipped with replaceable pins. The upper half shall be equipped with a securable access door. The access door shall rotate on 2 hinges located on the upper perimeter of the door. The lower half shall be comprised of 4 principal components hereinafter described as a tailgate hinge beam, a baffle, a hopper floor, and a hopper-loading sill. The tailgate hinge beam shall be located on the upper perimeter of the lower half. The baffle shall be a crossmember sheet extending across the full lateral width of the lower half and shall join to both lower half sidewalls. The opposing surfaces of the upper half and lower sidewalls shall be equipped with tracks in which the packing mechanism shall travel.

2. Construction:

a. Upper-Half:

i. Sidewalls: The upper-half sidewalls shall be constructed from 10 gauge steel reinforced with triangular truss-shaped formed braces constructed from 10 gauge high tensile steel.

ii. Upper-Half Hinge Beam: The upper-half hinge beam shall be constructed from 3 x 3 x 1/4 inch structural steel angle.

iii. Upper Crossmember: The upper crossmember shall be constructed from 3 x 1-1/2 x 1/4 inch high tensile steel structural tubing.

iv. Lower Crossmember: The lower crossmember shall be constructed from 10 gauge high tensile steel.

v. Top Surfaces: The upper-half top surfaces shall be constructed from 14 gauge high tensile steel.

vi. Top Perimeters: The upper-half top perimeters shall be constructed from 1-1/2 x 1-1/2 x 1/4 inch high tensile steel structural tubing.

b. Lower-Half:

i. Sidewalls: The lower-half sidewalls shall be constructed from 3/16 inch high tensile steel reinforced with formed braces constructed from 3 inch high tensile steel structural channel and 10 gauge high tensile steel.

ii. Tailgate Hinge Beam: The tailgate hinge beam shall be constructed from 1/4 inch high tensile steel reinforced with braces constructed from 3/16 inch high tensile steel.

iii. Baffle: The lower-half baffle shall be constructed from 3/16 inch high tensile steel reinforced with linear and lateral braces constructed from 3-1/2 x 3-1/2 x 1/4 inch steel structural angle. The baffle shall be equipped with a scraper bar constructed from 5 x 3 x 3/8 inch steel structural angle.

iv. Hopper Floor: The hopper floor shall be constructed from 1/4 inch 100,000 psi yield high tensile steel reinforced with 4 ribs constructed from 4 inch steel structural channel.

v. Hopper Loading Sill: The hopper loading sill shall be constructed from 3/8 inch high tensile steel reinforced with a brace constructed from 6-inch steel structural channel.

vi. Hopper Sidewall Liners (Optional): The interior hopper sidewalls shall be equipped with liners constructed from 3/16 inch high tensile steel.

c. Tracks: The tracks shall be constructed from 3 x 3 x 3/8 inch high tensile steel structural tubing. The track wear surfaces shall be constructed from 1/4 x 3 inch high tensile steel flat bar.

E. Packing Mechanism

1. General: The packing mechanism shall be contained within the tailgate shell. The packing mechanism shall be comprised of 3 principal components hereinafter described as a sweep/pack blade, a sweep shaft, and a slide plate. The sweep/pack blade shall rotate on the sweep shaft extending across the full lateral width of the packing mechanism. The sweep shaft shall join the

sweep/pack blade to the slide plate, and shall be mounted on the slide plate by means of 2 steel cast hubs. The slide plate shall travel in the tracks of the tailgate shell. The packing mechanism shall be actuated by 4 hydraulic cylinders of equal bore diameter hereinafter described as sweep cylinders (see also V C) and pack cylinders (see also V D). The sweep/pack blade rotation through the hopper of the tailgate (sweep cycle) shall be actuated by the 2 sweep cylinders connected to the sweep/pack blade and slide plate. The slide plate travel (pack cycle) shall be actuated by the 2 pack cylinders connected to the slide plate and the outer surfaces of the tailgate lower-half sidewalls. The packing mechanism shall operate such that the sweep cycle terminates automatically at a point where the sweep/pack blade cutting edge is approximately 7 inches above the hopper loading sill, and must be re-actuated to complete the sweep cycle. The packing mechanism shall operate such that the pack cycle shall be actuated automatically upon the termination of the sweep cycle. The packing mechanism shall be capable of exerting 39 psi of force across the sweep/pack blade face. The sweep/pack blade and the slide plate shall have the capability to be actuated independently.

2. Construction:

   a. Sweep/Pack Blade Face Sheet: The sweep/pack blade face sheet shall be constructed from 1/4 inch high tensile steel reinforced with internal linear and lateral braces constructed from 1/4 inch high tensile steel.

   b. Sweep/Pack Blade Cutting Edge: The sweep/pack blade cutting edge shall be constructed from 3/8 inch high tensile steel.

   c. Sweep Shaft: The sweep shaft shall be constructed from 4 inch outside diameter, 3/4 inch wall thickness high tensile steel tubing.

   d. Slide Plate Face Sheet: The slide plate face sheet shall be constructed from 3/16 inch high tensile steel reinforced with internal linear braces constructed from 3/16 inch high tensile steel and an upper perimeter sweep cylinder clevis beam constructed from 3/8 inch high tensile steel.

   e. Sweep / Pack Blade Liner (Optional): The sweep / pack blade face shall be equipped with a liner constructed from 3/16 inch high tensile steel.

3. Packing Mechanism Mounting/Guide Means:

   a. General: The packing mechanism shall be mounted on replaceable high density polyethylene shoes that shall travel on the track wear surfaces of the tailgate shell.

4. Packing Cycle Time: The packing mechanism shall be capable of completing the entire sweep and pack cycle in 25-30 seconds, and shall be capable of a hopper reload in 12-16 seconds after the beginning of the cycle.

F. Tailgate Locks:

1. Automatic Tailgate Locks: The tailgate shall be secured by locks at 2 points on the lower side perimeters. The locks shall be actuated by a hydraulic cylinder (See also V E). The locks shall be actuated automatically upon actuation of the tailgate lift cylinders.

G. Tailgate Maintenance Props: The tailgate shall be equipped with a positive means of support that is permanently attached and capable of being locked in position.

## IV. EJECTION MECHANISM

A. General: The ejection panel shall be activated by a single hydraulic cylinder mounted in an angular attitude (see also V A). The cylinder shall be connected to the ejection panel and the body front ejection cylinder clevis beam by replaceable pins. The ejection panel shall be capable of traversing the entire length of the body. The ejection mechanism shall be capable of exerting counteracting force against the payload. The ejection mechanism shall be capable of retracting automatically ("drift") as necessary to compact the entire payload (see also V O). The ejection cycle shall be accomplished by single, full stroke of the ejection mechanism cylinder.

B. Ejection Panel:

1. Construction:

a. Face Sheet: The panel face sheet shall be constructed from 10 gauge high tensile steel reinforced with braces constructed from 10 gauge high tensile steel and 3 x 3 x 1/4 inch high tensile steel structural tubing.

b. Cylinder Housing: The panel cylinder housing shall be constructed from 3/16 inch high tensile steel reinforced with braces constructed from 3/16 inch high tensile steel. The ejection mechanism cylinder clevis plates shall be constructed from 3/4 inch steel.

c. Perimeters: The panel perimeters shall be formed channel lips constructed from 10 gauge high tensile steel reinforced with braces constructed from 1/4 inch high tensile steel.

d. Heavy Duty Ejection Panel (optional): The panel cylinder housing shall be reinforced additionally by 2 braces constructed from 3 x 3 x 1/4 inch steel structural angle.

2. Ejection Panel Mounting/Guide Means: The panel shall be mounted on replaceable high density polyethylene shoes that shall travel in the 6 inch ejection panel guides installed in the trough of the body floor.

## V. HYDRAULIC SYSTEM

A. Ejection Mechanism Cylinder: The cylinder to actuate the ejection mechanism (see also IV A) shall be chrome plated _____ (R330B - tubes, multistage) double acting, with a main bore diameter of _____ (R330B - 5-1/4) inches and a stroke length of _____ (R330B - 140) inches.

B. Tailgate Lift Cylinders: The cylinders to raise the tailgate (see also III A) shall be chrome plated rod, single stage, single acting with a bore diameter of 3-1/2 inches and a stroke length of 33 inches.

C. Sweep Cylinders: The cylinders to actuate the sweep/pack blade (see also III E 1) shall be chrome plated rod, single stage, double acting with a bore diameter of 6 inches and a stroke length of 26 inches. The cylinder shall be capable of exerting 62,831 lbs. of output force.

D. Pack Cylinders: The cylinders to actuate the slide plate (see also III E 1) shall be chrome plated rod, single stage, double acting with a bore diameter of 6 inches and a stroke length of 40 inches. The cylinders shall be capable of exerting 90,478 lbs. of output force.

E. Automatic Tailgate Lock Cylinder (Optional): The cylinder to actuate the tailgate locks (See also III F 2) shall be chrome plated rod, single stage, double acting with a bore diameter of 2-1/2 inches and a stroke length of 6-3/4 inches.

F. Roll Bar Container Handling Device Cylinders (Optional): The cylinders to actuate the container handling device (see also XIV A) shall be chrome plated rod, single stage, double acting, with a bore diameter of 3-1/2 inches and a stroke length of 9-1/2 inches.

G. Heavy-Duty Roll Bar Container Handling Device Cylinders (Optional): The cylinders to actuate the container handling device (see also XIV B) shall be chrome plated rod, single stage, double acting with a bore diameter of 4 inches and a stroke length of 16 inches.

H. Overhead Cylinder Actuated Container Handling Device Cylinder (Optional): The cylinder to actuate the container handling device (see also XIV D) shall be chrome plated rod, single stage, double acting with a bore diameter of 6 inches and stroke length of 47 inches.

I. Pump: The pump shall be a single gear type delivering 48 GPM at an RPM of 1800.

J. Control Valves: The main control valve and the tailgate (packing mechanism) control valve shall be sectional type valves.

K. Hoses and Fittings: The hoses shall be double braid wire reinforced with a burst pressure to operating pressure ratio of 4-to-1. All hose fittings shall be JIC female swivel, and/or NPT male.

L. Underbody Oil Reservoir:

1. Capacity: The oil reservoir shall have a capacity of 50 gallons.

2. Location: The oil reservoir shall be mounted on the frame of the chassis.

3. The Oil Reservoir Shall Be Equipped With The Following:

a. Internal baffling to enhance oil flow and heat dissipation.

b. A magnetic trap extending into the reservoir to collect metal particles which may enter the hydraulic system.

c. An oil level sight gauge to permit visual determination of the oil level in the reservoir. The sight gauge shall have a 2 inch diameter window with a reflective background and a floating ball to indicate the oil level in the reservoir.

d. A filler-breather cap capable of straining oil as it is poured into the reservoir, and capable of providing 35 cubic feet of air breathing capacity.

e. A removable clean-out port equipped with a replaceable oil tight seal.

M. Shut-Off Valve: A shut-off valve shall be located in the suction line of the hydraulic system between the oil reservoir and the pump.

N. Filter: A filter, having a 50 GPM flow capacity, one-way bypass valve, replaceable spin-on element and visual indicator, shall be located in the return line of the hydraulic system.

O. Operating Pressure: The hydraulic system shall operate at a primary relief pressure of 2450 psi. The packing mechanism hydraulic system shall operate at a secondary relief pressure of 1600 psi. The ejection mechanism hydraulic system shall operate at a drift relief pressure of 1500 psi.

## VI. CONTROLS

A. Packing Mechanism Controls: Positive lever controls shall be located on the curbside of the tailgate to actuate the packing mechanism. The controls shall be capable of actuating the sweep blade and the slide plate independently. Actuation of the controls shall automatically accelerate the engine of the chassis to the proper RPM to operate the body.

B. Ejection Mechanism and Tailgate Lift Controls: Positive lever controls shall be located at the streetside front of the body to actuate the ejection cycle and the tailgate (raise and lower) with a manually actuated switch to accelerate the engine of the chassis to the proper RPM to operate the body.

C. Container Handling Device Control: A positive lever control shall be located on the curbside of the tailgate to actuate the container handling device with a manually

actuated switch to accelerate the engine of the chassis to the proper RPM to operate the body.

## VII. WARNING ALARM

A warning alarm shall be provided that emits an audible, intermittent signal when the transmission of the chassis is in the reverse position, or when the tailgate of the body is not in the fully lowered position.

## VIII. LIGHTING AND VEHICLE CONSPICUITY

A. General: Lights and reflectors shall be mounted on the body in accordance with Federal Motor Vehicle Safety Standard No. 108. The lamps shall be flush mounted in rubber grommets.

B. 1. Rear Mounted 6 Lamp Light Bar: A light bar shall be mounted on the upper-half of the tailgate. The light bar shall have 4 sealed beam red, directional and stop lamps of a 4 inch diameter, and 2 sealed beam white, back-up lamps of a 4 inch diameter. The lamps shall be flush mounted in rubber grommets.

2. Lamp Guards (Optional): The light bar shall have 4 vertical round bars to protect the 4 inch diameter lamps (NOTE: The lamp guards are included with container handling devices; see also XIV).

3. Mid-body Marker/Turn Lights: An amber intermediate turn signal lamp shall be mounted on each side of the body approximately at the mid-point of the body. In addition, an amber marker lamp shall be mounted on the upper side of the body directly above the intermediate turn signal lamp.

4. Vehicle Conspicuity Sheeting: The body shall be equipped with retroreflective sheeting that is applied in a pattern of alternating red and white color segments. The sheeting shall be in compliance with ANSI Standard Z245.1-1999 Section 7.2.16.

## IX. ACCESS DOOR

An access door, 30 inches x 30 inches, shall be located on the streetside of the body sidewall. The door shall be hinged on the front perimeter and securable on the rear perimeter.

## X. TOOL BOX (OPTIONAL)

A toolbox shall be mounted under the curbside of the body.

## XI. SPLASH GUARDS (OPTIONAL)

A. Rear Splash Guards: Splash guards shall be mounted aft of the rear tires of the chassis (total quantity of 2).

B. Front And Rear Splash Guards: Splash guards shall be mounted fore and aft of the rear tires of the chassis (total quantity of 4).

## XII. HOPPER LIGHTS (OPTIONAL)

Two sealed beam white hopper lights shall be mounted on the upper-half of the tailgate. The lamps shall be of a 4 inch diameter and surface mounted. The lights shall be actuated manually by a switch located on the curbside of the tailgate and a master switch located in the cab of the chassis.

## XIII. STROBE LIGHT

A strobe light that emits a yellow, intermittent signal shall be mounted on the upper-half of the tailgate. The light shall be actuated manually by a switch located in the cab of the chassis.

## XIV. CONTAINER HANDLING DEVICE

A. Overhead Winch Container Handling Device: A container handling device shall be mounted on the upper-half of the tailgate. The device shall be capable of engaging, raising, discharging, lowering, and disengaging standard rear loader metal containers up to a 10 cubic yard capacity. The device shall be actuated by a drum type winch with cable actuated by a hydraulic motor. The device shall have a 12,000 lb. lift capacity.

## XV. CONTAINER WASH-OUT SYSTEM (OPTIONAL)

A tank with a capacity of 80 gallons shall be mounted on the frame of the chassis. The tank shall be equipped with a handheld sprayer and a hose 15 feet in length to allow the operator/driver to spray containers.

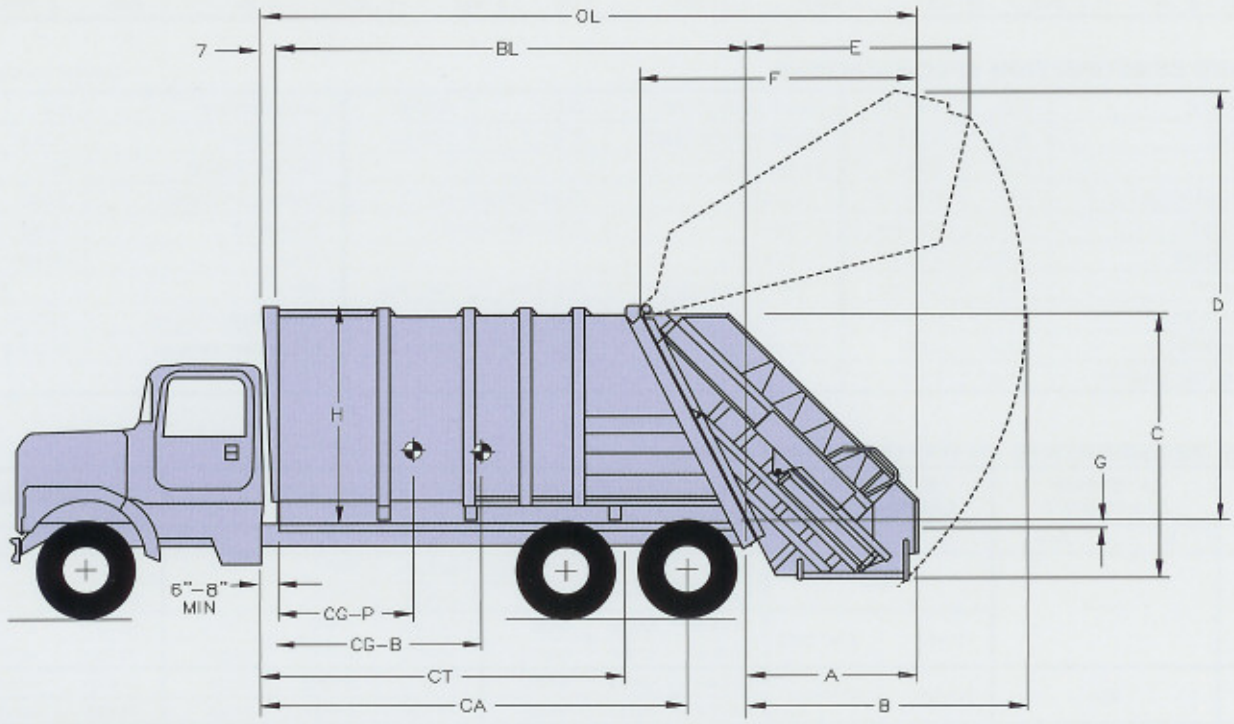
(Note: See also published rear loader literature for additional standard equipment and optional equipment definitions.)

# R300B
# REAR LOADER

BUILT FOR THE LONG HAUL
PAK-MOR
LIMITED

**Pak-Mor's Performance proven Rear Loader Series is the most consistently designed product family in the refuse equipment industry today.**

LOAD LINER




**DIMENSIONAL SPECIFICATIONS**

| SYMBOL | DESCRIPTION | DIMENSIONS | |
|---|---|---|---|
| | | In. | mm. |
| A | End of Body to End of Hopper | 74 | 1880 |
| B | End of Body to Extreme Arc of Tailgate | 120 | 3048 |
| C | Height of Tailgate | 116 | 2946 |
| D | Height of Tailgate – Elevated Position | 186 | 4724 |
| E | End of Body to End of Tailgate – Elevated Position | 96 | 2438 |
| F | Tailgate Length | 118 | 2997 |
| G | Loading Height Below Chassis Frame | 5 | 127 |
| G' | Loading Height Below Chassis Frame – with Optional Large Volume Hopper | 1 | 25 |
| H | Body Height | 94 | 2388 |
| - | Body Width | 96 | 2438 |

The products illustrated in this catalog are protected by United States and foreign patents, patents pending, and patents applied for. Illustrations and specifications are not binding as detailed as Pak-Mor reserves the right under the company's product development program to change the design or construction details and to furnish equipment when thus altered without reference to illustrations or specifications presented herein and supersede all previously published information.

BUILT FOR THE LONG HAUL
PAK-MOR
LIMITED

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Built For The Long Haul™

# R300B REAR LOADER SPECIFICATIONS

BUILT FOR THE LONG HAUL
PAK-MOR LIMITED
LOAD LINER

## GENERAL SPECIFICATIONS

CG = Center of Gravity

| MODEL | CAPACITY | | OVERALL LENGTH (OL) | | BODY LENGTH (BL) | | CG-BODY (CG-B) | | CG-PAYLOAD (CG-P) | | BODY WEIGHT (approximate) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | $yd^3$ | $m^3$ | in | mm | in | mm | in | mm | in | mm | lbs | kgs |
| R320B | 20 | 13.3 | 243 | 6172 | 162 | 4115 | 110 | 2794 | 78 | 1981 | 14100 | 6409 |
| R325B | 25 | 19.1 | 279 | 7087 | 198 | 5029 | 140 | 3556 | 99 | 2515 | 14690 | 6677 |
| R330B | 30 | 22.9 | 311 | 7899 | 230 | 5842 | 165 | 4191 | 113 | 2870 | 15300 | 6955 |
| R334B | 34 | 26.0 | 331 | 8407 | 250 | 6350 | 180 | 4572 | 121 | 3073 | 15950 | 7250 |

## BODY AND CONSTRUCTION SPECIFICATIONS

[5]100,000 PSI Steel [6]Hi-Tensile Steel

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Body Sidewalls[5] | 11 ga | 3.04 mm | Hopper Loading Width | 78 in | 1981 mm | Sweep Cylinders | 6 in | 152.4 mm |
| Body Floor[6] | 1/4 in | 6.35 mm | Hopper Opening Height | 67 in | 1702 mm | Eject Cylinder | 5.25 in | 133.3 mm |
| Body Roof | 11 ga | 3.04 | Packing Cycle | | | Eject Cyl. (R320B) | 5 in | 127.0 mm |
| Ejection Panel Guides | 6 in | 152.4 mm | Complete | 35 Seconds (approx.) | | Tailgate Lift Cylinders | 3.5 in | 88.9 mm |
| Ejection Panel[5] | 3/16 in | 4.76 mm | Reload | 15 Seconds (approx.) | | Oil Reservoir | 49 gal | 185.5 lit |
| Hopper Sidewalls[5] | 3/16 in | 4.76 mm | Packing Force | | | Pump | 48 gpm | 181.7 lpm |
| Hopper Floor[5] | 1/4 in | 6.35 mm | Pack Cylinder Output | 90478 lbs | 41041 kgs | Hoses | 4-to-1 burst | |
| Sweeper/Pack Blade[6] | 1/4 in | 6.35 mm | Sweep Face | 39 psi | 2.7 kgs/$cm^2$ | Primary Oper. Pressure | 2450 psi | 172.3 kgs/$cm^2$ |
| Hopper Capacity | 3.0 $yd^3$ | 2.3 $m^3$ | Pack Cylinders | 6 in | 152.4 mm | Packing Oper. Pressure | 1600 psi | 112.5 kgs/$cm^2$ |
| Hopper Cap. (opt. & w/CHD) | 3.3 $yd^3$ | 2.5 $m^3$ | | | | | | |

## CHASSIS REQUIREMENTS (*) (**) (***) (****) (*****)

| MODEL | CA "CLEAR" CAB-TO-AXLE | | CT "CLEAR" CAB-TO-TANDEM | | GAWR FRONT | | | GAWR REAR | | | GVW MINIMUM | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | in | mm | in | mm | type | lbs | kgs | type | lbs | kgs | type | lbs | kgs |
| R320B | ***** | | N/A | | SA Conv | ***** | ***** | SA Conv | ***** | ***** | SA Conv | ***** | ***** |
| | | | | | SA COE | ***** | ***** | SA COE | ***** | ***** | SA COE | ***** | ***** |
| | | | 120-130 | 3048-3302 | TA Conv | 10000 | 4535 | TA Conv | 37500 | 17006 | TA Conv | 47500 | 21542 |
| | | | | | TA COE | 12000 | 5442 | TA COE | 34500 | 15646 | TA COE | 46500 | 21088 |
| R325B | N/A | | 155-165 | 3937-4191 | TA Conv | 12000 | 5442 | TA Conv | 38000 | 17233 | TA Conv | 50000 | 22675 |
| | | | | | TA COE | 15000 | 6803 | TA COE | 37000 | 16780 | TA COE | 52000 | 23582 |
| R330B | N/A | | 186-196 | 4724-4978 | TA Conv | 12000 | 5442 | TA Conv | 42000 | 19048 | TA Conv | 54000 | 24489 |
| | | | | | TA COE | 15000 | 6803 | TA COE | 41000 | 18594 | TA COE | 56000 | 25396 |
| R334B | N/A | | ***** | ***** | TA Conv | ***** | ***** | TA Conv | ***** | ***** | TA Conv | ***** | ***** |
| | | | | | TA COE | ***** | ***** | TA COE | ***** | ***** | TA COE | ***** | ***** |

(*) Conv = Conventional Cab; COE = Cab Over Engine; SA = Single Axle; TA = Tandem Axle

(**) Body weights, minimum front and rear gross axle weight ratings (GAWR), and gross vehicle weights (GVW) are for standard R300B bodies. If optional features are specified, GAWR and GVW must be increased accordingly.

(***) Any chassis sent to PAK-MOR LTD. with less than the minimum specifications will not be mounted.

(****) Diesel chassis engines require full variable speed governor.

(*****) Consult Seguin office.

## STANDARD EQUIPMENT (except as may be replaced by optional equipment)

- Skid-resistant rear steps with handrails
- Manual tailgate locks
- Tailgate maintenance props
- FMVSS #108 lights and reflectors
- Rear mounted 6 lamp light bar
- Warning alarm
- Vehicle conspicuity sheeting
- Packer controls–positive lever type, split cycle with automatically activated throttle, curbside
- Ejection and tailgate lift controls–positive lever type with manually actuated throttle, streetside
- Buzzer system to cab from tailgate, curbside
- Frame mounted oil reservoir – 49 gal. capacity, equipped with magnetic trap, oil level sight gauge, filler-breather cap, shut-off valve (suction line), and clean-out port, curbside
- Filter – 50 GPM spin-on element return line filter with visual indicator

## OPTIONAL EQUIPMENT

- Roll bar container handling device – 2,000 or 3,000 lb. lift capacity
- Overhead winch – 12,000 lb. or 15,000 lb. lift capacity
- "Comb" type roll bar container handling device – for 120 through 1,100 liter European containers
- "Arm" type roll bar container handling device – for 700, 1,000, and 1,100 liter European container
- "Skip-Loader" sling type container handling device – for 4,5,7, and 10 cubic meter European skip-load containers
- Container washout system – 80 gal. capacity, equipped with hand-held sprayer (chassis must have air supply)
- Automatic tailgate locks
- Power take-off and live power drive options
- Rear view camera/monitor options
- Buzzer system to cab from tailgate, streetside and curbside
- Hopper lights
- Strobe lights
- Mid-body marker/turn lights
- Tool box, splash guards
- Access door – streetside only