

PROPOSAL

Purchasing Agent  
City of Norman  
Post Office Box 370  
Norman, OK 73070

\_\_\_\_\_  
(date)

Purchasing Agent:

The undersigned proposes to furnish the following equipment, f.o.b., Norman, Oklahoma, ready for immediate use with all the necessary parts and accessories needed for its operation, as follows:

One (1) New and Unused 62,000 GVWR Truck Chassis with  
24 Yard Automated Side Load Refuse Compactor

The truck chassis and refuse bodies shall be delivered as a complete package. The successful bidder shall bid both truck chassis and refuse body. One single bidder will be responsible for the preparation and delivery of the complete package to Norman, Oklahoma.

**"COMPLY" OR "EXCEPTION" MUST BE CLEARLY NOTED IN THE "BIDDER'S PROPOSAL" SECTION. A DETAILED EXPLANATION OF THE EXCEPTION(S) MUST BE PROVIDED ON A SEPARATE PAGE LABELED "EXCEPTIONS - DETAIL"**

TRUCK CHASSIS

MANUFACTURER \_\_\_\_\_

MODEL \_\_\_\_\_

BIDDER'S  
PROPOSAL

YEAR State year \_\_\_\_\_

GROSS VEHICLE WEIGHT RATING 62,000 lbs. (minimum) \_\_\_\_\_

COLOR Dupont Imron Green 5000 #895 \_\_\_\_\_

WHEELBASE

The wheelbase of the tilt cab type truck shall be determined by body vendor's requirements. \_\_\_\_\_

CAB TO TANDEM (CT) LENGTH

The CT length will accommodate the body manufacturer's required CT length.

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FRAME (RBM)            2.2 million in-lbs.

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AXLES AND SUSPENSION

FRONT                    Steel front axle and suspension, minimum  
18,000 lbs. GAWR

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REAR                    Single speed tandem drive rear axle,  
minimum 46,000 lb. GAWR. Rear suspension  
Hendrickson HMX 460, axle spacing 54".  
Speed compatible to 65 mph. No spin or  
automatic positive locking differential  
on both rear axles.

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NOTE                    Rear axle ratio to be selected by bidder  
in accordance with engine and transmission  
provided. The ratio which will provide a  
loaded road speed on level grade of at  
least 65 mph and the greatest low gear  
reduction is desired.

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ENGINE

Type                    Cummins Compressed Natural Gas ISLG  
8.9 liter or approved equivalent and  
be top 3 in its fuel efficient class.  
The speed limit to best at 65 mph and  
a five minute idle time factory set in  
the engine ECM and factory pass code  
shall be provided or not entered at  
factory.

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Horsepower (gross) 345 at 1,900 RPM (minimum)

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Torque (gross) 850 ft-lb.; torque at 29% minimum

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Filters                   Engine shall be equipped with  
heavy-duty full flow replaceable  
element oil, fuel, air and coolant  
conditioner filters. Coolant  
conditioner filter is not needed  
if extended life coolant is used.

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Warranty Must include 5 year 150,000 mile full warranty with no deductible. \_\_\_\_\_

TRANSMISSION

Type Allison 5 speed RDS3000, close ratio with PTO opening \_\_\_\_\_

Warranty Must include 5 year 150,000 mile full warranty with no deductible. \_\_\_\_\_

RADIATOR

Maximum capacity cooling system available. Must be compatible with Automatic Transmission. System to include a coolant conditioner and filter and silicone radiator hoses, by-pass hoses coolant, and heater hoses. Engine manufacturer's computer controlled engine alarm system (light and audible alarm) and shutdown system activated by low engine oil pressure, low engine coolant level and high engine coolant temperature or any combination of these occurrences. \_\_\_\_\_

Radiator must have cutout for front mounted hydraulic pump. \_\_\_\_\_

ALTERNATOR 12 Volt, 90 amperes \_\_\_\_\_

BATTERY 312 amp-hr. \_\_\_\_\_

STEERING Hydraulic power steering \_\_\_\_\_

BRAKES Full air brakes with 13.2 cubic foot compressor, pressure gauge, air reservoir drain valve; automatic slack adjusters, automatic moisture ejector valve(s) (unheated). Moisture ejector valve(s) not to be mounted on bottom of air tank if possible, side or remote location(s) preferred. \_\_\_\_\_

Shall be out-board mounted \_\_\_\_\_

The parking brake shall be an independently operated spring-loaded, air actuated type with the

spring brake control mounted on or near the dash within easy reach of driver \_\_\_\_\_

The brake air system shall be equipped with Bendix model # AD-IS mounted to outside of frame for easy access. \_\_\_\_\_

Air dryer between air compressor and the #1 reservoir, Bendix ADIS or approved equivalent. To include heater Dryer shall be mounted outside the frame for easy access. \_\_\_\_\_

Shall have automatic moisture ejector valve(s) heated Located on wet tank. \_\_\_\_\_

WHEELS

Front 2 - 22.5 X LW (Disc, painted white) \_\_\_\_\_

Rear 4 - 22.5 X 8.0 (Disc, painted white) \_\_\_\_\_

TIRES

Type Steel-belted radial \_\_\_\_\_

Front 2 - 315/80/22.5 18PR Goodyear G291 Duraseal Load range "L" or approved equal \_\_\_\_\_

Rear 8 - 11R22.5 Goodyear G177 Duraseal Load range "H" or approved equal \_\_\_\_\_

PERFORMANCE ITEMS

Factory installed speedometer, odometer, ammeter or voltmeter fuel gauge, engine oil pressure gauge, tachometer, engine hourmeter, and dash mounted air pressure gauge. \_\_\_\_\_

CAB Dedicated right hand steer. Tilt cab with factory tinted safety glass in all openings; tinted windshield. \_\_\_\_\_

Interior to be black in color. \_\_\_\_\_

The driver's seat shall be either a Bostrom Level-Air, a National Cush-N-Air or equal

with a single passenger seat. \_\_\_\_\_

FUEL TANK

Shall be stainless steel or approved equal, with a life expectancy of 15 years or more. Shall have the capacity to achieve a route of 200 miles on a 3600 PSI Fast-fill. Tanks shall be frame mounted underbody or cabinet style mounted behind cab. Shall have an extra fill port located at front of vehicle on the opposite side of side fill port. Each fill port shall have a starter/ignition interrupt device so vehicle cannot start or run when fueling. \_\_\_\_\_

ACCESSORIES

Variable speed electric operated windshield wipers and washers \_\_\_\_\_

Chrome or stainless steel outside heated mirrors. Left and right side mirrors to be large West Coast type, 6" X 16" to include lower convex spot mirrors on both sides - factory installed. \_\_\_\_\_

Dual sun visors \_\_\_\_\_

Seat belts \_\_\_\_\_

Cab dome light \_\_\_\_\_

Heater/defroster \_\_\_\_\_

Integral factory installed air conditioner; in-cab unit (R134A) \_\_\_\_\_

Right and left side grab handles \_\_\_\_\_

Factory installed air horn, mounted in area that cannot be damaged by normal operation. \_\_\_\_\_

Heavy-duty front bumper with two (2) each: tow hooks, frame mounted \_\_\_\_\_

AM/FM Radio \_\_\_\_\_

2-way radio

Shall be E.F. Johnson model 53SL-ES mounted inside cab within easy access by driver. Must use Max Rad Antenna mounted to rear of

cab or on rear window not to exceed height of cab. \_\_\_\_\_

Full variable speed Pneumatic throttle control with switch for actuation with PTO. \_\_\_\_\_

Heavy-duty center point tow pin at the rear with heavy-duty gusseted tail board \_\_\_\_\_

Air filter pre-cleaner \_\_\_\_\_

All lights and reflectors to conform to State Code of Oklahoma \_\_\_\_\_

Stainless steel vertical exhaust system, angle cut with stainless steel guard \_\_\_\_\_

Fire Extinguisher (model 5MB-5H Badger or equal) \_\_\_\_\_

Auto-adjusting volume back-up alarm, must meet the latest issue of SAE J994, Type B 107DBLA \_\_\_\_\_

Cab mounted work lights, switch mounted in cab, to be mounted at top rear corners of cab \_\_\_\_\_

CAMERA/MONITOR SYSTEM:

Rear view camera/monitor system shall be installed. Power requirements shall be 12 volt D.C. camera, lens to be 6.5 mm, f 1/8 C-mount. Monitor will be 6" diagonal with heavy duty cabinet and adjustable mounting base. Camera to monitor cable shall have steel braid flexible outer covering and be coaxial shielded (military-type). The cable shall be securely tied to the body and a flexible conduit shall be used at pinch points. Intec CarVision Model #9300 system or equal shall be provided. \_\_\_\_\_

An audible backup warning system shall be included in conjunction with the camera system when backing to warn driver of the distance of the object behind vehicle. \_\_\_\_\_

Coax cable shall be run independent from any other cabling, shall be run inside metal tubing or approved equivalent with the only exception of pivot points. \_\_\_\_\_

**AUTOMATED SIDE LOADER**

BODY

Body floor shall be flat and made of 3/16" minimum AS400 ultra high-strength, hi-abrasion resistant steel plate with a minimum surface hardness of 400 BHN and 177,000 psi minimum yield

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HOPPER ENCLOSURE

The hopper shall have a minimum static capacity of 3 cubic yards.

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Shall have a minimum dynamic capacity (displacement rate) of 10.5 cubic yards per minute

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Hopper floor shall be minimum 1/4" AS-400 abrasion resistant, ultra high-strength plate steel with a minimum hardness of 400 BHN and 177,000 psi minimum yield

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Entrance way of containers into hopper shall be protected from wind with 14 gauge skirting to fit within 6" of containers used by the City of Norman (Otto - 35 to 95 gallon containers exclusively)

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Hydraulic hopper crusher shall be of tubular frame with 10 gauge A-36 sheet metal hinged to front wall of body. Crusher to rotate on three sets of hinges, using 1 1/2" pins. Crusher operated by a 2 1/2" X 30" hydraulic cylinder using a 4-way air toggle valve mounted in cab, close to driver. Safety device to be installed to prevent arm from dumping unless crusher is in the fully opened position.

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PACKING MECHANISM

The packer frame shall be formed from 3/8" T-1, ASTMA 514 Grade B, plate.

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Hopper shall be lined with no less than nine (9) 1/4" HR 500 wear strips. A minimum of two (2) on each side and five (5) on the floor. Plow steel wear strips are not acceptable.

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Packer cylinders shall be installed in a horizontal overlapping design and shall have a 5" bore X 42" stroke and 3" rod size.

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A pivoting packer plate with a rubber wiper shall be installed to prevent dumping behind packer. Plate shall be constructed of 1/2" plate, ASTM A 36. No sliding follower plates are acceptable.

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FULL-EJECT-PUSH OUT

The hoist/eject process shall be capable of ejecting the full load in under 60 seconds

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The unloading process shall be achieved by hoisting the body to a 42 degree angle with the use of 2 telescoping cylinders mounted outside the chassis frame rails for added stability. Hoist cylinders shall have a minimum stroke of 72" for good stability while dumping.

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LIFT MECHANISM

The lifting mechanism shall be capable of operating simultaneously with any phase of pack operations with full force and full flow. Flow dividers and priority valves will not be accepted. Lifting mechanisms which utilize chains to lift are not acceptable.

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Shall be capable of extending, clamping, raising, dumping, and returning containers from any position without the need to fully "retract".

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Shall be capable of a complete cycle in a maximum of 8 seconds

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Shall be capable of reaching a minimum of 84" from the side of the body to the center of a 105 gallon container

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Lifting mechanism shall combine the lift arm raise and container dump functions into one lever for ease of operation

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Shall be rectangular 50,000 PSI steel telescopic boom design and have a lifting capacity of 2,000 pounds at any extension

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Must be capable of gripping containers placed within one foot of the envelope of the unit

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When in dump position, the highest point on a 105 gallon container shall not exceed 120" above the truck

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The lifting mechanism shall incorporate an interlock to prohibit the possibility of dumping the contents of the container outside the confinement of the hopper

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The lift mechanism shall not rely on electrical switches to sequence operation

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GRIPPER

The container gripper shall incorporate an adjustable hydraulic circuit limiting the radial force applies to the container. Grippers not capable of pressure sensitive adjustments are unacceptable due to the likelihood of container damage.

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HYDRAULICS

Hydraulic power shall be by heavy-duty tandem section gear pump Parker/Commercial P365 or approved equivalent. Both sections will provide flow and pressure enough to run the system at idle speed. When throttle is applied, one section with dump back into the suction side of the pump allowing the remaining section to run the packer between stops.

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Pump shall achieve all operational hydraulic requirements at engine idle. An over speed system will be provided to prevent damage to hydraulic system. Over speed controls shall not be accessible by operator.

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Return line filter shall be an in-tank, fiberglass type rated at 10 micron with clearly visible dirt indicator. Suction strainer shall be 100 micron, mounted inside the reservoir and equipped with a built in bypass for pump protection.

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There shall be a 48 gallon reservoir with a 10 micron sealed air breather, sight gauge, a 2' gate valve on the suction outlet and a magnetic drain plug. Low mounted with access from the ground.

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All hydraulic plumbing shall be aeroquip or approved equal "bite wire" type crimping on fittings and nylon guarded in tight areas.

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Seamless steel tubing shall be used wherever possible and held in place with shock absorbing bolt-on clamps \_\_\_\_\_

All hose ends, tubing and adapters shall have JIC 37 degree flares. Pipe thread or flat-faced O-ring seals are not acceptable. \_\_\_\_\_

Any exposed hose shall be guarded with a hose protector \_\_\_\_\_

ELECTRICAL

Body wiring will be tied into the circuitry provided by the OEM no mid range splices will be accepted \_\_\_\_\_

A schematic identifying each wire and corresponding circuit must be affixed inside the cover of the body junction box \_\_\_\_\_

All body wiring shall be color coded and hot stamped with appropriate word designation labeled every 12". \_\_\_\_\_

All wiring shall meet chassis manufacture's specifications. Any splices shall be soldered and sealed with heat shrink insulation. Butt connectors and/or scotch locks will not be accepted. All wiring to be run inside approved loom. \_\_\_\_\_

LIGHTING

All lighting shall be LED type recessed to prevent breakage. For long life and ease of service, all clearance, tail, stop and back-up lights shall be plug-in type, grommet mounted, shock resistant, waterproof, with Lexan lens. They shall be Truck-Lite or approved equal. \_\_\_\_\_

Lighting to include: two 4" clear strobing LED recessed grommet mounted truck light or approved equal, mounted to the rear in place of beacon \_\_\_\_\_

ADDITIONAL

A universal button type gripper, belt type not acceptable, shall be capable of exerting an appropriate radial force on each size container to firmly grip the container without dropping, damaging, or contorting. This force shall be controlled by toggle switch on the control box. \_\_\_\_\_

A centralized automatic lubrication system

shall be provided. XGS model #4036 or equal.

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Gripper shall be capable of grasping and dumping containers with capacities of 30 - 110 gallons including fully-automated, Universal and semi-automated containers. Belt type grippers will not be acceptable.

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Return line filter shall be 10 micron absolute

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Dual halogen work lights are to be installed, one each in the hopper and lift arm work area

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An auto neutral, lift arm activated with service brake status.

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One (1) set of filters to complete a full service on both the truck and body shall be provided.

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PAINTING

The completed unit shall be cleaned and all weld slag shall be removed.

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One (1) coat of high grade primer shall be applied

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Two (2) coats of Dupont Imron Green 5000, #895 enamel paint shall be applied

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Any governmental incentives, tax credits, or discounts available in regards to alternative fuel vehicle programs shall be the responsibility of the successful bidder and shall be passed along to the City of Norman by discounting final price.

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OPERATION AND MAINTENANCE MANUALS

Include one (1) with each vehicle: Operator's manual, Service manual, parts manual, and repair manual for each chassis, engine, transmission, and body on CD if available. These manuals are to include information on all systems of the equipment, including but not limited to, detailed electrical and hydraulic systems diagrams and diagnostic flow chart guides, engine emission systems, and any accessories. This requirement shall not delay delivery of the equipment, but payment cannot be made until all requirements are met.

ADVERTISING

Except for emblem installed by manufacture identifying manufacturer and model, no emblem, logo, tag or other device or design promoting the dealer or contractor may be affixed in any manner to any vehicle delivered under this contract, except for emblem installed by manufacturer identifying manufacturer and model.

ACCEPTANCE

Delivery of a vehicle to a purchaser does not constitute acceptance for the purpose of payment. Final acceptance and authorization of payment shall be given only after a thorough inspection indicates that the vehicle meets contract specifications and conditions. All equipment, options, and features provided must be designed, constructed, and installed to be fully suitable for their intended use and service.

WELDING

Welding shall not be permitted on the frame side rails, nor shall the frame rails be cut to lengthen or shorten the wheelbase. Wheelbase modifications are allowed only by sliding the suspension with the "AF" dimension affected accordingly (excess length behind the rear axle may be cut off as required). Any wheelbase modification shall result in a wheelbase and frame combination that is identical to one available from the manufacturer.

TRAINING

A manufacturer's representative of the successful bidder shall provide one (1) full working day of instruction and training upon delivery for each of the following: operator, body maintenance, and chassis maintenance including drive train.

90 DAY INSPECTION

Subsequent to the aforementioned training program, the successful vendor shall provide a trained mechanic to inspect the units and correct any warranted deficiencies. This shall occur approximately 90 days after the training program.

MANUFACTURER'S BROCHURES

Manufacturer's brochures and literature giving full detailed information on the trucks and bodies by the bidder shall be included with this proposal.

WARRANTY

Include a list of all parts that are under warranty. The bidder at the time of contracting is advised of the particular purpose for which the goods are required and that the City of Norman is

relying on the bidder's skill or judgement to select or furnish suitable goods; bidder warrants that the goods shall be fit for such purpose. The City of Norman wishes to be placed on the manufacturer's mailing list to receive all special bulletins and supplements pertaining to services, repairs, problems, etc. on both body and chassis. Please provide information regarding the necessary procedure to accomplish this task.

Towing shall be covered by manufacturer for the first six (6) months.

Please describe warranty: \_\_\_\_\_  
\_\_\_\_\_

The City of Norman will accept bids that meet or exceed the minimum requirements. Bids that fail to meet the minimum requirements will not be accepted.

One (1) 62,000 GVWR Truck Chassis with Automated Side Loader Refuse Body \$ \_\_\_\_\_

Less trade-in: 2002 Peterbuilt model 320, with 24 yard Side Loader Refuse Body VIN: 1NPZHD9X13D714683 (UNIT #261) -\$ \_\_\_\_\_

Options:  
Extended hydraulic component warranty with no deductible

\$ \_\_\_\_\_ \$ \_\_\_\_\_ \$ \_\_\_\_\_  
One (1) year Two (2) year Three (3) year

US Fleet Tracking GPS unit model #USFTVX5 uninstalled \$ \_\_\_\_\_

**TOTAL DELIVERY PRICE:**  
(Less all taxes)

\$ \_\_\_\_\_ \$ \_\_\_\_\_ \$ \_\_\_\_\_

If awarded the contract on the basis of the above bid, we agree to deliver the units to the City of Norman **within 180 days from the date the Purchase Order is received.** Every day, starting with the 181 st day, a penalty of \$50.00 (fifty dollars) will be assessed against the company or corporation that the bid has been awarded, that the units have not been delivered. This penalty will stay enforce until the City of Norman accepts the units. The ability of the vendor to meet this delivery date will be a major factor in the award of this bid.

SIGNED: \_\_\_\_\_ BUSINESS NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

These specifications have been reviewed and approved by:

\_\_\_\_\_  
Mike White, Fleet Management Superintendent

**VENDOR LIST**

**Rush Truck Centers**

5200 I-40 West  
OKC, OK 73137  
Phone: 947-2391  
FAX: 946-5489  
ATTN: STAN CLARK

**J and R Equipment**

25c North Council Road  
Oklahoma City, OK 73127  
Phone: 495-5110  
FAX: 495-5112  
ATTN: Rodney Womack

**Bridgeport Truck Manufacturing, Inc.**

P.O. Box 217  
Bridgeport, TX 76426  
FAX: (940) 683-5475  
ATTN: Tony Kouri

**Waste Research, Inc.**

P.O. Box 998  
HWY 69 South  
Chouteau, OK 74337  
Phone:(800) 880-9278  
FAX: (918) 476-8508  
ATTN: Wayne Fields

**Crane Carrier Company**

P.O. Box 582891  
Tulsa, OK 74158  
Phone: (918)836-1651  
FAX: (918) 832-7348  
ATTN: Butch Butler

**Bruckner's Truck Sales**

P.O. Box 75758  
Oklahoma City, OK 73147  
Phone: 942-4800  
FAX: 942-4940  
ATTN: Ken Schmitz