

REQUEST FOR BOARD ACTION

HENDERSON COUNTY BOARD OF COMMISSIONERS

MEETING DATE: November 2, 2009

SUBJECT: Purchase of Replacement Loader for the Transfer Station

ATTACHMENTS: Yes
1. Summary of Bids
2. JCB Bid
3. Caterpillar Bid
4. Specifications Comparison

SUMMARY OF REQUEST:

The Solid Waste Division has received six bids for a new replacement for the loader used in the Stoney Mountain Transfer Station. The bids ranged from \$134,644 to \$180,549.00.

Staff recommends rejecting the low bid from Interstate Equipment Company for a JCB 426-HT Loader for failing to meet significant specifications. The engine and transmission are not manufactured by the equipment manufacturer, as called for in the specifications. The turning radius is 18% larger than the specification. This causes concern in the tight quarters of the transfer station. The specific warranty is an option costing \$4,850. Other specifications of concern were no locking front axle, weaker electrical system, limited ingress/egress, and the door does not swing out of the operator's vision when open. Other discrepancies were minor.

The Caterpillar bid from Carolina CAT for the 930H met almost all specifications. No discrepancies should effect operation. The rated horsepower is 149, when the specification called for 150. There are grease fittings on the drive shaft and there is no 4th gear in reverse. High speed in reverse is not desirable. Other discrepancies were also minor.

The Solid Waste Division has rented a Caterpillar 930G for the last three years and has had satisfactory service. Replacement with the updated model should provide satisfactory service.

Caterpillar offers an optional attachment coupler for \$5,070. The couple on the base bid is similar or equal to the coupler on all six bids offered. The design of the standard coupler has been problematic in the transfer station operation. The optional upgrade should address the maintenance issues we have experienced with the standard version.

The Solid Waste Fund FY 2010 budget included \$172,795.00 for the purchase of this machine.

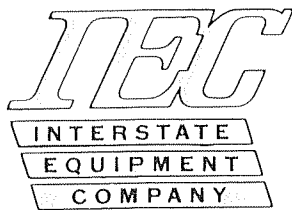
BOARD ACTION REQUESTED: Authorize the County Engineer to purchase the Caterpillar 930H Loader with the Fusion Coupler upgrade from Carolina CAT of Asheville at a purchase price of \$148,698 and the optional coupler for \$5,070.

Suggested Motion:

I move that the Board authorize the County Engineer to purchase the Caterpillar 930H Loader with the Fusion Coupler upgrade from Carolina CAT of Asheville at a purchase price of \$148,698 and the optional coupler for \$5,070.

Loader Bid Candidates-10/19/2009

	A	B	C	D	F	G
1						
2	Vendors			On Time	Price	Options
3	ASC Volvo			yes	\$157,252 Volvo L70F	
4	Carolina Cat			yes	\$143,628 930H Caterpillar	\$148,698 with Catz Fusion Coupler
5	Stafford Equipment			yes	\$180,549 Kawasaki 70TMV-2	\$3,685-Ride Control, \$1,408 AC Condenser
6	Linder Industrial			yes	\$146,730 Komatsu WA250PZ-6	\$8,200-High Lift
7	Flintco Equipment Company			yes	\$144,200 John Deere 544K	
8	Interstate Equipment			yes	\$134,644 JCB-42GHT	\$4,000-Extended Warranty, \$4,850 Ext. Hydraulic Warranty
9	May Heavy Equipment					



P. O. BOX 868

PHONE (704) 873-9048

FAX (704) 872-6071

STATESVILLE, NORTH CAROLINA 28687

October 15, 2009

Mr. Will Sagar
Henderson County Landfill
800 Stoney Mountain Road
Hendersonville, NC 28791

Dear Will:

Thank you for your Bid Request on a Wheel Loader for Henderson County Landfill Transfer Station on Stoney Mountain Road.

The prices quoted are F.O.B. Jobsite, but do not include any applicable taxes.

Delivery could be made in approximately sixty (60) days from receipt of order.

We appreciate your interest in our equipment and if additional information is needed, please feel free to call.

Very truly yours,

INTERSTATE EQUIPMENT COMPANY

A handwritten signature in cursive script, appearing to read "John Lisk", is written over the company name.

John Lisk

GB/wl
Enclosure
c. Frank Eller
Gene Barkley
Tige Hopper

P. O. Box 3061
RALEIGH, N. C. 27602

Phone (919) 467-1801

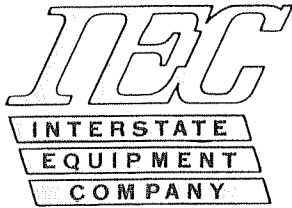
FAX (919) 481-0875

"CONSTRUCTION AND INDUSTRIAL EQUIPMENT"

122 Gardners Terrace Road
W. COLUMBIA, S. C. 29172

Phone (803) 794-7400

FAX (803) 739-0869



PROPOSAL TO
HENDERSON COUNTY LANDFILL
HENDERSONVILLE, NORTH CAROLINA
OCTOBER 15, 2009

ONE (1) JCB MODEL 426-HT HIGH LIFT WHEEL LOADER WITH ALL STANDARD EQUIPMENT, and including:

- 426-HT Base Machine
- Operator Handbook
- JCB Radial Tires 20.5 R-25 L3
- Cab ROPS/FOPS with 3" seat belt
- A/C & Heater with radiator debris guard
- Limited Slip Axles
- High Lift Loader Arms, One (1) Auxiliary Service
- 24-V to 12-V Converter
- Work Lights, Two (2) Rear Cab Mounted
- Seat Air Suspension Heated
- Brake Pipes, Stainless Steel
- Reverse Smart Alarm
- Wide Rear Fenders
- Auxiliary Relief, 3-rd Spool
- 860# Additional Counterweight
- Cooling Fan, Auto Reverse
- Quickhitch
- 2.5 Cu. Yd. GP Bucket W/BOTP
- Wastemaster Guard Package
- 4.0 Cu. Yd. Rockland Waste Bucket with Rubber Cutting Edge
- AM/FM Radio / CD
- Standard Warranty Two (2) Years - Unlimited Hours

PRICE.....F.O.B...JOBSITE.....\$134,644.00

OPTIONS: 1. Extended Warranty Powertrain Only - 60 Month

/ 7,500 HR.....ADD.....\$ 4,000.00

2. Extended Warranty Hydraulic With Power Train

60 Month / 7,500 HR.....ADD.....\$ 4,850.00

BID SPECIFICATIONS

Compliant? Please mark whether machine offered meets the stated specification. Where there are exceptions, please indicate what specification the offered machine will meet in the final section, marked EXCEPTIONS.

BASIC SPECIFICATIONS

Y_X_N Engine rated net power shall be at least 150 hp (112 kW) according to SAE J1349.

Y_X_N Engine maximum net power shall be at least 160 hp (119 kW) according to SAE J1349.

Y_X_N Machine operating weight (including optional counterweight) shall be no less than 28,725 lb (13,029 kg).

Y_N_X Machine height shall be 10'9" (3278 mm). **10'11"**

Y_X_N Machine overall length with standard general purpose bucket shall be 25' (7620 mm).

Y_X_N Machine width over tires shall be 8'5" (2570 mm) with 20.5-R25 L-3 tires.

Y_N_X Machine wheelbase length shall be 9'6" (2900 mm). **9'8"**

Y_N_X Maximum turning radius over tire shall be 17'4" (5275 mm) with 20.5-R25 L-3 tires. **20'7"**

Y_X_N Standard bucket struck capacity shall be 2.2 cubic yards (1.7 cubic meters).

Y_X_N Second bucket, Waste Handling with floor protection shall be 4.0 cubic yards (3.0 cubic meters).

Y_X_N Bucket will be specifically designed for refuse application.

Y_N_X Dump clearance at maximum lift and 45° dump angle shall be at least 9'7" (2927 mm). **9'3"**

Y_N_X Bucket clearance at maximum lift and level shall be at least 12'0" (3667 mm) **11'11"**.

Y_X_N Minimum breakout force shall be 30,263 lb (13,727 kg) with 2.7yd (2.1m) hook on general purpose bucket.

ENGINE

Y_N_X Engine shall be manufactured by the equipment manufacturer. **CUMMINS**

Y_X_N Engine shall be EPA Tier III compliant, with Tier III compliance certificate shall be available upon request.

Y_X_N Emissions requirements shall meet or exceed worldwide requirements and be Tier III compliant.

Y_X_N Engine shall be six-cylinder, with electronically controlled fuel injection for precise timing.

Y_X_N Engine shall have dry cylinder liners.

Y_X_N Engine shall be direct injection turbocharged with turbocharger for reliability, durability and performance.

Y_X_N Engine shall have a high pressure common rail fuel system with an oil lubricated fuel pump.

Y_N_X Machine shall be standard with two 950 CCA maintenance free batteries mounted in bolt-on battery boxes. **TWO 850 CCA**

Y_X_N Fuel priming pump and fuel/water separator shall be standard.

Y_X_N Starting aid for improved starting in extremely cold temperatures shall be standard.

Y_N_X Machine shall have a standard 95 amp brushless alternator. **70 AMP**

Y_X_N Machine shall have a standard backup alarm.

Y_X_N Machine shall have a battery disconnect switch.

- Y_X__ N___ Machine shall use an air-to-air-aftercooler (ATAAC).
- Y_X__ N___ Engine shall have a 4 valve per cylinder crossflow head.
- Y_X__ N___ Machine shall use gear driven water and oil pumps.
- Y_X__ N___ Machine ECM shall automatically derate the engine for protection during overheating.
- Y_X__ N___ Engine and cooling compartments shall be completely separated.

POWER TRAIN/TRANSMISSION

- Y___ N_X___ Transmission shall be manufactured by the equipment manufacturer. **Z-F**
- Y_X__ N___ Machine shall have a countershaft powershift transmission.
- Y_X__ N___ Machine shall have a forward/neutral/reverse switch standard on the implement control joystick.
- Y_X__ N___ Machine shall have four forward and four reverse speeds with a maximum of 23.8 mph (38.3 kph).
- Y_X__ N___ Transmission shall have manual and autoshift settings with variable shift (fuel economy) and power shift (aggressive loading) modes.
- Y_X__ N___ Joystick shall have a button for downshifting on demand.
- Y_X__ N___ Machine shall have ground accessible ports to sample engine and transmission oil.
- Y_X__ N___ Machine shall have an operator programmable transmission neutralizer with an override switch standard.
- Y_X__ N___ Transmission shall utilize spur gears that are precision ground and heat treated for durability.
- Y_X__ N___ Transmission clutch pressure shall be electronically controlled.
- Y_X__ N___ Machine shall have transmission oil sight gauge and fill spout on the same side of the machine.

STEERING

- Y_X__ N___ Steering articulation angle shall be 40°.
- Y_X__ N___ Machine shall have two steering cylinders.
- Y_X__ N___ Steering system shall use variable displacement load sensing piston pump.
- Y___ N_X___ High impact rubber steering stops..
- Y_X__ N___ Steering console and gauge panel shall be adjustable.
- Y_X__ N___ Steering shall be controlled by steering wheel.

BRAKES

- Y_X__ N___ Service brake shall feature completely closed and sealed standard inboard oil-immersed disc brakes on front and rear axles that are adjustment free.
- Y_X__ N___ Heavy duty rear brakes with integrated oil cooler shall be optional for high energy applications.
- Y_X__ N___ Indicator light shall alert operator if brake pressure drops.
- Y_X__ N___ Machine shall have continually charged nitrogen accumulators to provide stopping capability after loss of engine power or equivalent.
- Y_X__ N___ Parking brake shall be mechanical, shoe-type mounted on driveline for positive manual operation. The transmission shall be automatically neutralized when parking brake is applied.
- Y_X__ N___ Dual suspended brake pedals shall function as a brake and transmission neutralizer so the operator can maintain high engine rpm for full hydraulic flow and fast cycle times.

HYDRAULIC SYSTEM

- Y_X__ N___ Hydraulic system shall be manufacturer designed and modular.
- Y_X__ N___ Minimum hydraulic output at 2300 engine rpm and 1,000 psi (6900 kPa) with SAE 10W oil at 150 ° F (65 ° C) shall be 58 gal/min (220 L/min).
- Y_X__ N___ Maximum hydraulic cycle time shall be 9.5 seconds.
- Y_X__ N___ Maximum working pressure shall be 3,755 psi (25,900 kPa).

- Y_X__ N___ Machine shall feature pilot safety valve to disable implement functions.
- Y_X__ N___ Implement hydraulics shall be load-sensing.
- Y_X__ N___ Low effort joystick control shall offer simultaneous lift and tilt functions.
- Y_X__ N___ Machine shall have pressure taps to allow quick diagnosis of complete hydraulic system.
- Y_X__ N___ Heavy duty hydraulic oil cooler.
- Y_X__ N___ Hydraulic couplings shall have O-ring face seals.

AXLES

- Y_X__ N___ Axles shall be manufactured by the equipment manufacturer.
- Y_X__ N___ Front axle shall be rigidly mounted to the front loader frame.
- Y_X__ N___ Rear axle shall have an oscillation trunnion to allow the rear wheel to raise or drop a total of 16.6" (423 mm) with 17.5 tires
- Y_X__ N___ The rear axle shall oscillate +/-11 ° .
- Y_X__ N___ Rear axle shall have a remote trunnion lubrication fitting to simplify maintenance.
- Y___ N_X__ Front axle shall contain a means of locking the front differential with a foot pedal in the cab, without stopping the machine. Axle shall automatically stay locked until equal torque is sensed on both wheels. **LIMITED SLIP BOTH AXLES**
- Y_X__ N___ Limited Slip Differentials shall be on rear axle.
- Y_X__ N___ Seals on the axle and housing shall keep oil in and lock contaminants out to prevent contamination of internal components.
- Y_X__ N___ Axles shall have Duo-cone seals or equivalent between brake and final drives.
- Y_X__ N___ Machine shall have axle seal guards standard.
- Y_X__ N___ Planetary final drives shall be lubricated from the main oil sump.

WHEELS

- Y_X__ N___ Standard tire size shall be 20.5-25
- Y_X__ N___ Tires will be radial design.

OPERATORS STATION

- Y___ N_X__ Machine shall have two (2) ingress/egress doors. **1 DOOR**
- Y___ N_X__ Both doors shall latch open at 180 degrees.
- Y_X__ N___ Personal storage areas shall include places to store a lunch box, thermos, cup, coat rack and a lockable storage area.
- Y_X__ N___ Hydraulic joystick control shall operate both lift and tilt functions. Joystick shall integrate transmission direction switch.
- Y_X__ N___ An additional joystick control shall also provide actuation of the third function on the joystick, for activation of all three functions simultaneously.
- Y___ N_X__ An Engine Speed Control feature shall be available to engine rpm can be set and maintained with a switch in the cab.
- Y_X__ N___ Seat shall be air- suspension and will include fully adjustable fore/aft position, seat back angle, bottom cushion height, armrest angle and suspension stiffness.
- Y_X__ N___ Seat shall include a 3" (75 mm) wide retractable seat belt.
- Y_X__ N___ Front and rear wipers with washers.
- Y_X__ N___ Steps leading up to the cab shall be wide and angled out for secure footing.
- Y_X__ N___ A 12V outlet for powering electronics.
- Y_X__ N___ Machine cab shall meet ROPS and FOPS criteria as well as regulations for sound exposure.
- Y_X__ N___ Machine shall have flat, fixed glass standard with optional sliding glass doors.
- Y_X__ N___ Rear window shall have an electric defroster.
- Y_X__ N___ Glass panels shall extend from cab roof to floor allowing visibility to ground.
- Y_X__ N___ Machine shall have white-faced gauges including hydraulic, engine and transmission temperatures as well as fuel level.
- Y_X__ N___ Warning/indicator and diagnostic functions shall include: Primary steering malfunction, electrical system voltage low, coolant temperature, engine oil

pressure low, parking brake applied, brake charge pressure low, transmission oil temperature, transmission oil filter bypass, and hydraulic oil filter bypass.

- Y_X_N Machine shall have a standard tool box.
Y_X_N AM/FM Radio CD player
Y_X_N Operators station shall expose the operator to sound pressure of no greater than 74 dB(A) per ANSI/SAE J1166 May 90 procedures to provide maximum operator safety.

LOADER LINKAGE

- Y_X_N Machine shall have a parallel lift linkage.
Y_X_N Linkage shall be the box boom style loader arm.
Y_X_N High lift providing an additional 20" (508 mm) of lift height over standard boom.

WORK TOOL OPTIONS

- Y_X_N Bucket lift circuit shall have four positions: raise, hold, lower and float.
Y_X_N Controls shall be adjustable from automatic kickout horizontal to full lift.
Y_X_N Tilt circuit shall have three positions: tilt back, hold and dump.
Y_X_N An automatic bucket positioner shall be available that can be adjusted to desired loading angle and does not require visual spotting.
Y_X_N Quick coupler, cab controlled.
Y_X_N Cab controlled hydraulic circuit for power attachments.

SERVICEABILITY

- Y_X_N Radiator and oil coolers shall be separated.
Y_X_N Machine shall have a hydraulic oil sight gauge.
Y_X_N All service points shall be accessible from ground level, on the same side of the machine.
Y_X_N Machine shall have ground level valve access.
Y_N_X Radiator coolant and transmission and hydraulic oil levels shall have sight gauges. **TRANS & HYD ONLY**
Y_X_N Spin on filters for engine oil and hydraulic oil shall be vertically mounted for easier servicing.
Y_N_X Scheduled oil sampling ports shall be factory installed for improved access to engine, transmission and hydraulic oils.
Y_X_N Machine shall have easy access to engine and cooling compartments through two (2) gull wing doors that swing up and are held in place with gas struts.
Y_X_N Cooling fan shall be hydraulically driven and separate from the engine compartment.
Y_X_N Machine shall have an automatic reversing fan with manual override switch.
Y_X_N Machine shall have a self-diagnostic transmission and data link.
Y_X_N Machine error codes shall be accessible from gauge panel.
Y_X_N Standard service features shall include: Standard hydraulic oil cooler; adjustment free brakes; adjustment free engine fuel system; grouped grease fittings; positive torque hose clamps; braided, color coded and numbered wiring.
Y_X_N Machine shall have a maintenance free driveshaft.
Y_X_N A stationary radiator and coolant hoses shall be standard.
Y_X_N Adjustment free brakes shall be standard.
Y_X_N Machine shall have grouped grease fittings.

MINIMUM SERVICE FILL CAPACITIES

- Y_X_N Fuel tank shall have a 59.2 gal (224 L) capacity.
Y_X_N Cooling system shall have a 7.9 gal (29.9 L) capacity.
Y_N_X Crankcase shall have a 5 gal (18.9 L) capacity. **3.7 GAL**
Y_N_X Transmission shall have a 9.1 gal (34.5 L) capacity. **7 GAL**
Y_X_N Hydraulic system (including tank) shall have a 39 gal (148 L) capacity.

Y_X_ N_ Hydraulic tank shall have a 18.5 gal (70 L) capacity.
Y_X_ N_ Front differential and final drive shall be 6.9 gal (26 L). Rear differential and final drive shall be 6.6 gal (25 L).

OWNING AND OPERATING COSTS

Y_X_ N_ Extended Life Coolant/Antifreeze shall allow for up to 6,000 hours between changes.
Y_X_ N_ Machine shall have a factory recommended oil change interval of 500 hours.
Y_ N_X_ With required oil sampling, hydraulic oil shall have a 4,000 hour change interval.
2,000hrs
Y_ N_X_ Machine shall have a factory recommended 1,000 hour hydraulic filter change.
500Hrs
Y_ N_X_ Machine shall have a minimum drain interval of 2,000 hours for transmission oil.
1,000hrs
Y_X_ N_ Machine shall have service interval of a 500 hour engine oil change.

ADDITIONAL FEATURES

Y_ N_X_ Steel fenders shall be standard.
Y_X_ N_ Waste package providing guards for windows, steering, drive train and axles.
Y_X_ N_ Waste package providing guards for crankcase, powertrain, and driveshaft.
Y_X_ N_ Waste package providing guards for windshield, radiator, and lights.
Y_X_ N_ Cab shall have options for customizing including: 12V converter, radio installation package, sun visor for windshield, external mirror package, and auxiliary lighting packages.
Y_X_ N_ Cooling compartment shall be completely enclosed to limit sound emissions.
Y_X_ N_ Air conditioning system shall utilize R-134a refrigerant which does not contain CFCs (chlorofluorocarbons).
Y_X_ N_ All major components shall be designed to be rebuilt and reused.
Y_X_ N_ Equipment must be accompanied by a factory recommended preventative maintenance schedule including procedures, mileage/hour intervals, pre- placement part numbers and fluid specifications.

WARRENTY

Y_ N_X_ Twelve month/2,000 hour complete warranty
Y_X_ N_ Sixty month/7,500 hour powertrain warranty
Y_X_ N_ Sixty month/7,500 hour hydraulic warranty

2 YEAR UNL HOURS

EXCEPTIONS EACH EXCEPTION EXPLAINED ON LINE IN BOLD PRINT

October 19, 2009

Mr. Will Sagar
Henderson County
800 Stoney Mountain Road
Hendersonville, NC 28791

Dear Will,

Per your bid specifications, we are submitting the following bid. The bid meets all of your specifications except where noted on the bid specification sheet.

Primary Bid

1- New Caterpillar 930H Wheel Loader

Selling Price- \$ 143,628.00 plus applicable sales tax

In addition, we are offering an alternate bid with Caterpillar's new exclusive premier coupler design... the Fusion coupler. The alternate bid meets the same specifications and is priced below.

Alternate Bid

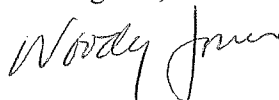
1- New Caterpillar 930H Wheel Loader with CAT Fusion Coupler

Selling Price- \$ 148,698.00 plus applicable sales tax

Thank you for the opportunity to bid your wheel loader needs. As always, we stand ready to support your purchase with after the sale parts and service. A Carolina CAT capabilities brochure is included in the bid to summarize our many offerings.

Please let me know if we can be of any further assistance.

Best regards,



Woody Jones
Carolina CAT
Territory Manager, Asheville
828-231-8595 (cell)

Carolina CAT
New CAT 930H Wheel Loader

BID SPECIFICATIONS

Compliant? Please mark whether machine offered meets the stated specification. Where there are exceptions, please indicate what specification the offered machine will meet in the final section, marked EXCEPTIONS.

BASIC SPECIFICATIONS

- Y ☐ N ☒ Engine rated net power shall be at least 150 hp (112 kW) according to SAE J1349. *149 hp rather than 150*
- Y ☒ N ☐ Engine maximum net power shall be at least 160 hp (119 kW) according to SAE J1349.
- Y ☒ N ☐ Machine operating weight (including optional counterweight) shall be no less than 28,725 lb (13,029 kg).
- Y ☒ N ☐ Machine height shall be 10'9" (3278 mm).
- Y ☒ N ☐ Machine overall length with standard general purpose bucket shall be 25' (7620 mm).
- Y ☒ N ☐ Machine width over tires shall be 8'5" (2570 mm) with 20.5-R25 L-3 tires.
- Y ☒ N ☐ Machine wheelbase length shall be 9'6" (2900 mm).
- Y ☒ N ☐ Maximum turning radius over tire shall be 17'4" (5275 mm) with 20.5-R25 L-3 tires.
- Y ☒ N ☐ Standard bucket struck capacity shall be 2.2 cubic yards (1.7 cubic meters).
- Y ☒ N ☐ Second bucket, Waste Handling with floor protection shall be 4.0 cubic yards (3.0 cubic meters).
- Y ☒ N ☐ Bucket will be specifically designed for refuse application.
- Y ☒ N ☐ Dump clearance at maximum lift and 45° dump angle shall be at least 9'7" (2927 mm).
- Y ☒ N ☐ Bucket clearance at maximum lift and level shall be at least 12'0" (3667 mm).
- Y ☒ N ☐ Minimum breakout force shall be 30,263 lb (13,727 kg) with 2.7yd (2.1m) hook on general purpose bucket.

ENGINE

- Y ☒ N ☐ Engine shall be manufactured by the equipment manufacturer.
- Y ☒ N ☐ Engine shall be EPA Tier III compliant, with Tier III compliance certificate shall be available upon request.
- Y ☒ N ☐ Emissions requirements shall meet or exceed worldwide requirements and be Tier III compliant.
- Y ☒ N ☐ Engine shall be six-cylinder, with electronically controlled fuel injection for precise timing.
- Y ☒ N ☐ Engine shall have dry cylinder liners.
- Y ☒ N ☐ Engine shall be direct injection turbocharged with turbocharger for reliability, durability and performance.
- Y ☒ N ☐ Engine shall have a high pressure common rail fuel system with an oil lubricated fuel pump.
- Y ☒ N ☐ Machine shall be standard with two 950 CCA maintenance free batteries mounted in bolt-on battery boxes.
- Y ☒ N ☐ Fuel priming pump and fuel/water separator shall be standard.
- Y ☒ N ☐ Starting aid for improved starting in extremely cold temperatures shall be standard.
- Y ☒ N ☐ Machine shall have a standard 95 amp brushless alternator.
- Y ☒ N ☐ Machine shall have a standard backup alarm.
- Y ☒ N ☐ Machine shall have a battery disconnect switch.
- Y ☒ N ☐ Machine shall use an air-to-air-aftercooler (ATAAC).

New CAT 930H Wheel Loader

- Y ☒ N ☐ Engine shall have a 4 valve per cylinder crossflow head.
Y ☒ N ☐ Machine shall use gear driven water and oil pumps.
Y ☒ N ☐ Machine ECM shall automatically derate the engine for protection during overheating.
Y ☒ N ☐ Engine and cooling compartments shall be completely separated.

POWER TRAIN/TRANSMISSION

- Y ☒ N ☐ Transmission shall be manufactured by the equipment manufacturer.
Y ☒ N ☐ Machine shall have a countershaft powershift transmission.
Y ☒ N ☐ Machine shall have a forward/neutral/reverse switch standard on the implement control joystick.
Y ☐ N ☒ Machine shall have four forward and four reverse speeds with a maximum of 23.8 mph (38.3 kph). *4F - 3R - do you need high speed 4th gear in Reverse? Safety?*
Y ☒ N ☐ Transmission shall have manual and autoshift settings with variable shift (fuel economy) and power shift (aggressive loading) modes.
Y ☒ N ☐ Joystick shall have a button for downshifting on demand.
Y ☒ N ☐ Machine shall have ground accessible ports to sample engine and transmission oil.
Y ☒ N ☐ Machine shall have an operator programmable transmission neutralizer with an override switch standard.
Y ☒ N ☐ Transmission shall utilize spur gears that are precision ground and heat treated for durability.
Y ☒ N ☐ Transmission clutch pressure shall be electronically controlled.
Y ☒ N ☐ Machine shall have transmission oil sight gauge and fill spout on the same side of the machine.

STEERING

- Y ☒ N ☐ Steering articulation angle shall be 40°.
Y ☒ N ☐ Machine shall have two steering cylinders.
Y ☒ N ☐ Steering system shall use variable displacement load sensing piston pump.
Y ☒ N ☐ High impact rubber steering stops..
Y ☒ N ☐ Steering console and gauge panel shall be adjustable.
Y ☒ N ☐ Steering shall be controlled by steering wheel.

BRAKES

- Y ☒ N ☐ Service brake shall feature completely closed and sealed standard inboard oil-immersed disc brakes on front and rear axles that are adjustment free.
Y ☐ N ☐ Heavy duty rear brakes with integrated oil cooler shall be optional for high energy applications. *- No option available - N/A*
Y ☒ N ☐ Indicator light shall alert operator if brake pressure drops.
Y ☒ N ☐ Machine shall have continually charged nitrogen accumulators to provide stopping capability after loss of engine power or equivalent.
Y ☒ N ☐ Parking brake shall be mechanical, shoe-type mounted on driveline for positive manual operation. The transmission shall be automatically neutralized when parking brake is applied.
Y ☒ N ☐ Dual suspended brake pedals shall function as a brake and transmission neutralizer so the operator can maintain high engine rpm for full hydraulic flow and fast cycle times.

HYDRAULIC SYSTEM

- Y ☒ N ☐ Hydraulic system shall be manufacturer designed and modular.
Y ☒ N ☐ Minimum hydraulic output at 2300 engine rpm and 1,000 psi (6900 kPa) with SAE 10W oil at 150 ° F (65 ° C) shall be 58 gal/min (220 L/min).
Y ☒ N ☐ Maximum hydraulic cycle time shall be 9.5 seconds.
Y ☒ N ☐ Maximum working pressure shall be 3,755 psi (25,900 kPa).
Y ☒ N ☐ Machine shall feature pilot safety valve to disable implement functions.

New CAT 930H Wheel Loader

- Y ☒ N ☐ Implement hydraulics shall be load-sensing.
Y ☒ N ☐ Low effort joystick control shall offer simultaneous lift and tilt functions.
Y ☒ N ☐ Machine shall have pressure taps to allow quick diagnosis of complete hydraulic system.
Y ☒ N ☐ Heavy duty hydraulic oil cooler.
Y ☒ N ☐ Hydraulic couplings shall have O-ring face seals.

AXLES

- Y ☒ N ☐ Axles shall be manufactured by the equipment manufacturer.
Y ☒ N ☐ Front axle shall be rigidly mounted to the front loader frame.
Y ☐ N ☐ Rear axle shall have an oscillation trunnion to allow the rear wheel to raise or drop a total of 16.6" (423 mm) with 17.5 tires *— Not sure — CAT does have 12° oscillation*
Y ☒ N ☐ The rear axle shall oscillate $\pm 11^\circ$.
Y ☒ N ☐ Rear axle shall have a remote trunnion lubrication fitting to simplify maintenance.
Y ☒ N ☐ Front axle shall contain a means of locking the front differential with a foot pedal in the cab, without stopping the machine. Axle shall automatically stay locked until equal torque is sensed on both wheels.
Y ☒ N ☐ Limited Slip Differentials shall be on rear axle.
Y ☒ N ☐ Seals on the axle and housing shall keep oil in and lock contaminants out to prevent contamination of internal components.
Y ☒ N ☐ Axles shall have Duo-cone seals or equivalent between brake and final drives.
Y ☐ N ☒ Machine shall have axle seal guards standard. *No axle seal guards offered from factory —*
Y ☒ N ☐ Planetary final drives shall be lubricated from the main oil sump. *May fabricate if necessary*

WHEELS

- Y ☒ N ☐ Standard tire size shall be 20.5-25
Y ☒ N ☐ Tires will be radial design.

OPERATORS STATION

- Y ☒ N ☐ Machine shall have two (2) ingress/egress doors.
Y ☒ N ☐ Both doors shall latch open at 180 degrees.
Y ☒ N ☐ Personal storage areas shall include places to store a lunch box, thermos, cup, coat rack and a lockable storage area.
Y ☒ N ☐ Hydraulic joystick control shall operate both lift and tilt functions. Joystick shall integrate transmission direction switch.
Y ☒ N ☐ An additional joystick control shall also provide actuation of the third function on the joystick, for activation of all three functions simultaneously.
Y ☒ N ☐ An Engine Speed Control feature shall be available to engine rpm can be set and maintained with a switch in the cab.
Y ☒ N ☐ Seat shall be air- suspension and will include fully adjustable fore/aft position, seat back angle, bottom cushion height, armrest angle and suspension stiffness.
Y ☒ N ☐ Seat shall include a 3" (75 mm) wide retractable seat belt.
Y ☒ N ☐ Front and rear wipers with washers.
Y ☒ N ☐ Steps leading up to the cab shall be wide and angled out for secure footing.
Y ☒ N ☐ A 12V outlet for powering electronics.
Y ☒ N ☐ Machine cab shall meet ROPS and FOPS criteria as well as regulations for sound exposure.
Y ☒ N ☐ Machine shall have flat, fixed glass standard with optional sliding glass doors.
Y ☒ N ☐ Rear window shall have an electric defroster.
Y ☒ N ☐ Glass panels shall extend from cab roof to floor allowing visibility to ground.
Y ☒ N ☐ Machine shall have white-faced gauges including hydraulic, engine and transmission temperatures as well as fuel level.
Y ☒ N ☐ Warning/indicator and diagnostic functions shall include: Primary steering malfunction, electrical system voltage low, coolant temperature, engine oil pressure low, parking brake applied, brake charge pressure low, transmission oil

NEW CAT 930H Wheel Loader

- temperature, transmission oil filter bypass, and hydraulic oil filter bypass.
- Y ☒ N ☐ Machine shall have a standard tool box.
- Y ☒ N ☐ AM/FM Radio CD player
- Y ☒ N ☐ Operators station shall expose the operator to sound pressure of no greater than 74 dB(A) per ANSI/SAE J1166 May 90 procedures to provide maximum operator safety.

LOADER LINKAGE

- Y ☒ N ☐ Machine shall have a parallel lift linkage.
- Y ☒ N ☐ Linkage shall be the box boom style loader arm.
- Y ☒ N ☐ High lift providing an additional 20" (508 mm) of lift height over standard boom.

WORK TOOL OPTIONS

- Y ☒ N ☐ Bucket lift circuit shall have four positions: raise, hold, lower and float.
- Y ☒ N ☐ Controls shall be adjustable from automatic kickout horizontal to full lift.
- Y ☒ N ☐ Tilt circuit shall have three positions: tilt back, hold and dump.
- Y ☒ N ☐ An automatic bucket positioner shall be available that can be adjusted to desired loading angle and does not require visual spotting.
- Y ☒ N ☐ Quick coupler, cab controlled.
- Y ☐ N ☐ Cab-controlled hydraulic circuit for power attachments. *per email dated 10/13/09*

SERVICEABILITY

- Y ☒ N ☐ Radiator and oil coolers shall be separated.
- Y ☒ N ☐ Machine shall have a hydraulic oil sight gauge.
- Y ☒ N ☐ All service points shall be accessible from ground level, on the same side of the machine.
- Y ☒ N ☐ Machine shall have ground level valve access.
- Y ☒ N ☐ Radiator coolant and transmission and hydraulic oil levels shall have sight gauges.
- Y ☒ N ☐ Spin on filters for engine oil and hydraulic oil shall be vertically mounted for easier servicing.
- Y ☒ N ☐ Scheduled oil sampling ports shall be factory installed for improved access to engine, transmission and hydraulic oils.
- Y ☒ N ☐ Machine shall have easy access to engine and cooling compartments through two (2) gull wing doors that swing up and are held in place with gas struts.
- Y ☒ N ☐ Cooling fan shall be hydraulically driven and separate from the engine compartment.
- Y ☒ N ☐ Machine shall have an automatic reversing fan with manual override switch.
- Y ☒ N ☐ Machine shall have a self-diagnostic transmission and data link.
- Y ☒ N ☐ Machine error codes shall be accessible from gauge panel.
- Y ☒ N ☐ Standard service features shall include: Standard hydraulic oil cooler; adjustment free brakes; adjustment free engine fuel system; grouped grease fittings; positive torque hose clamps; braided, color coded and numbered wiring.
- Y ☐ N ☒ Machine shall have a maintenance free driveshaft. *Has 2 grease fittings (one on slip yoke splines and driveshaft center support bearing)*
- Y ☒ N ☐ A stationary radiator and coolant hoses shall be standard.
- Y ☒ N ☐ Adjustment free brakes shall be standard.
- Y ☒ N ☐ Machine shall have grouped grease fittings.

MINIMUM SERVICE FILL CAPACITIES

- Y ☒ N ☐ Fuel tank shall have a 59.2 gal (224 L) capacity.
- Y ☒ N ☐ Cooling system shall have a 7.9 gal (29.9 L) capacity.
- Y ☐ N ☒ Crankcase shall have a 5 gal (18.9 L) capacity. *4.2 gallons is all CAT recommends*
- Y ☒ N ☐ Transmission shall have a 9.1 gal (34.5 L) capacity.
- Y ☒ N ☐ Hydraulic system (including tank) shall have a 39 gal (148 L) capacity.
- Y ☒ N ☐ Hydraulic tank shall have a 18.5 gal (70 L) capacity.

New CAT 930H Wheel Loader

Y ☒ N ☐ Front differential and final drive shall be 6.9 gal (26 L). Rear differential and final drive shall be 6.6 gal (25 L).

OWNING AND OPERATING COSTS

Y ☒ N ☐ Extended Life Coolant/Antifreeze shall allow for up to 6,000 hours between changes. *Recommend adding coolant system extender at 3000 hours*

Y ☒ N ☐ Machine shall have a factory recommended oil change interval of 500 hours.

Y ☒ N ☐ With required oil sampling, hydraulic oil shall have a 4,000 hour change interval.

Y ☒ N ☐ Machine shall have a factory recommended 1,000 hour hydraulic filter change.

Y ☒ N ☒ Machine shall have a minimum drain interval of 2,000 hours for transmission oil. *CAT recommends 1000 hours*

Y ☒ N ☐ Machine shall have service interval of a 500 hour engine oil change.

ADDITIONAL FEATURES

Y ☒ N ☐ Steel fenders shall be standard.

Y ☒ N ☒ Waste package providing guards for windows, steering, drive train and axles. *Some apply - see below*

Y ☒ N ☐ Waste package providing guards for crankcase, powertrain, and driveshaft.

Y ☒ N ☐ Waste package providing guards for windshield, radiator, and lights.

Y ☒ N ☐ Cab shall have options for customizing including: 12V converter, radio installation package, sun visor for windshield, external mirror package, and auxiliary lighting packages.

Y ☒ N ☐ Cooling compartment shall be completely enclosed to limit sound emissions.

Y ☒ N ☐ Air conditioning system shall utilize R-134a refrigerant which does not contain CFCs (chlorofluorocarbons).

Y ☒ N ☐ All major components shall be designed to be rebuilt and reused.

Y ☒ N ☐ Equipment must be accompanied by a factory recommended preventative maintenance schedule including procedures, mileage/hour intervals, pre- placement part numbers and fluid specifications.

WARRENTY

Y ☒ N ☐ Twelve month/2,000 hour complete warranty

Y ☒ N ☐ Sixty month/7,500 hour powertrain warranty

Y ☒ N ☐ Sixty month/7,500 hour hydraulic warranty

EXCEPTIONS

- Machine availability is currently 11-12 weeks from receipt of order.
- All warranties cover 100% of parts and labor expense. Repairs to be performed at Carolina CAT shop (nearest branch is Asheville). There is no charge for travel (Zone Charge) in the first 90 days. After 90 days work is to be performed at Carolina CAT or incur a Zone Charge for Field Service.

Walter Jones
Territory Manager

Carolina



CAROLINA CAT
P.O. BOX 1095
CHARLOTTE, NC 28201-1095
WWW.CAROLINACAT.COM

WOODY JONES (828) 231-8595
TERRITORY MANAGER
ASHEVILLE (828) 251-2500
wjones@carolinacat.com

QUOTATION/SALES ORDER



S Henderson County
O 802 Stoney Mountain Road
L
D Hendersonville, NC 28791-1349

S Same
H
I
P

T
O CONTACT: Mr. Will Sagar

T
O CONTACT:

SALESMAN	ACCOUNT NUMBER	ORDER NUMBER	CUSTOMER P.O. NUMBER
Jones - 107	391175		

DATE	FOB	SHIP VIA	WHEN
10/19/2009	Henderson County, NC	Common Carrier	Est. 12 Weeks

1	NEW CATERPILLAR 930H WHEEL LOADER EQUIPPED AS SPECIFIED		
289-8889	930H WHEEL LOADER		
303-2047	LINKAGE, HIGH LIFT, VERSALINK		
226-1186	FENDERS, FRONT, HEAVY DUTY		
289-8960	ENCLOSURE, STANDARD		
294-9434	STEERING, STANDARD		
290-8524	CAB, DELUXE		
239-5814	SEAT, COMFORT, AIR SUSPENSION		
107-4643	MIRRORS, REARVIEW, INTERNAL		
239-7396	RADIATOR, STANDARD		
289-8965	FAN, REVERSING		
289-8990	DIFFERENTIAL, LIMITED SLIP, REAR		
257-1626	COUNTERWEIGHT, 2394#		
303-2037	HYDRAULICS, 3 VALVE, 2 LEVERS, HIGH LIFT		
290-6490	INSTRUCTIONS, ANSI, NACD		
294-9471	MANUAL, OPERATION MAINTENANCE, ENGLISH		
255-3623	TIRES, 20.5-R25 BS, L3		
248-4152	RADIO, AM/FM CD PLAYER		
290-7176	WASTE HANDLER PACKAGE		
256-8889	BUCKET, GENERAL PURPOSE, 2.6 CYD, HOOK ON		
8E-4566	CUTTING EDGE, BOLT ON (4 PIECE)		
304-4311	QUICK COUPLER, STANDARD		
0P-0210	DOMESTIC TRUCK		
0P-0411	INLAND FREIGHT		
	<u>CAT WORK TOOLS</u>		
241-0916	BUCKET, LIGHT MATERIAL, 4.0 CYD, HOOK ON		
251-5418	CUTTING EDGE GROUP, RUBBER		
	TOTAL SELLING PRICE		\$143,628
	<u>WARRANTIES</u>		
	GOVERNMENTAL 12 MONTHS OR 5000 HOURS TOTAL MACHINE (PREMIER)		
	AND 60 MONTHS OR 7500 HOURS ON POWER TRAIN + HYDRAULICS		
	*** Machine quoted is plus any applicable sales tax ***		
TOTALS		\$0.00	\$143,628.00
TERMS:	Payment due net 30 days upon receipt of invoice.	Total List	\$143,628.00
		Freight & Prep	0.00
		VA Warranty	0.00
		Discount	0.00
		Subtotal	\$143,628.00
WARRANTY:	GOV 12 MO/5000 HR TOTAL, 60 MO/7500 HR PWR TRN + HYD	0.00% Taxes	0.00
INSURANCE:	CUSTOMER TO INSURE	Subtotal	\$143,628.00
CSA:	NONE	Trade-In	0.00
	MAKE: N/A	Grand Total	\$143,628.00
	MODEL: N/A		
	S/N: N/A		
TRADE-IN:			
SUBMITTED BY:	Woody Jones, Territory Manager	ACCEPTED BY:	

Carolina



CAROLINA CAT
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CHARLOTTE, NC 28201-1095
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TERRITORY MANAGER
ASHEVILLE (828) 251-2500
wjones@carolinacat.com

QUOTATION/SALES ORDER



S O L D
Henderson County
802 Stoney Mountain Road
Hendersonville, NC 28791-1349


S H I P
Same

T O
CONTACT: Mr. Will Sagar

T O
CONTACT:

SALESMAN	ACCOUNT NUMBER	ORDER NUMBER	CUSTOMER P.O. NUMBER
Jones - 107	391175		

DATE	FOB	SHIP VIA	WHEN
10/19/2009	Henderson County, NC	Common Carrier	Est. 12 Weeks

1	ALTERNATE BID		
	289-8889	NEW CATERPILLAR 930H WHEEL LOADER EQUIPPED AS SPECIFIED	
	303-2047	WITH FUSION QUICK COUPLER	
	226-1186	930H WHEEL LOADER	
	289-8960	LINKAGE, HIGH LIFT, VERSALINK	
	294-9434	FENDERS, FRONT, HEAVY DUTY	
	290-8524	ENCLOSURE, STANDARD	
	239-5814	STEERING, STANDARD	
	107-4643	CAB, DELUXE	
	239-7396	SEAT, COMFORT, AIR SUSPENSION	
	289-8965	MIRRORS, REARVIEW, INTERNAL	
	289-8990	RADIATOR, STANDARD	
	257-1626	FAN, REVERSING	
	303-2037	DIFFERENTIAL, LIMITED SLIP, REAR	
	290-6490	COUNTERWEIGHT, 2394#	
294-9471	HYDRAULICS, 3 VALVE, 2 LEVERS, HIGH LIFT		
255-3623	INSTRUCTIONS, ANSI, NACD		
248-4152	MANUAL, OPERATION MAINTENANCE, ENGLISH		
290-7176	TIRES, 20.5-R25 BS, L3		
0P-0210	RADIO, AM/FM CD PLAYER		
0P-0411	WASTE HANDLER PACKAGE		
	DOMESTIC TRUCK		
	INLAND FREIGHT		
	<u>CAT WORK TOOLS</u>		
310-9395	FUSION QUICK COUPLER		
315-6342	KIT, COUPLER HYDRAULIC SUPPLY		
314-3211	BUCKET, GENERAL PURPOSE 2.88 CYD, FUSION		
8E-4566	CUTTING EDGE, BOLT ON (4 PIECE)		
ETO	BUCKET, GENERAL PURPOSE WASTE/REFUSE W/ RUBBER EDGE (LIKE 314-3197)		
	TOTAL SELLING PRICE	\$148,698	
	<u>WARRANTIES</u>		
	GOVERNMENTAL 12 MONTHS OR 5000 HOURS TOTAL MACHINE (PREMIER)		
	AND 60 MONTHS OR 7500 HOURS ON POWER TRAIN + HYDRAULICS		
	<u>*** Machine quoted is plus any applicable sales tax ***</u>		
TOTALS		\$0.00 \$148,698.00	
TERMS:	Payment due net 30 days upon receipt of invoice.	Total List \$148,698.00	
		Freight & Prep 0.00	
		VA Warranty 0.00	
		Discount 0.00	
		Subtotal \$148,698.00	
WARRANTY:	GOV 12 MO/5000 HR TOTAL, 60 MO/7500 HR PWR TRN + HYD		
INSURANCE:	CUSTOMER TO INSURE		
CSA:	NONE	0.00% Taxes 0.00	
TRADE-IN:	MAKE: N/A	Subtotal \$148,698.00	
	MODEL: N/A	Trade-In 0.00	
	S/N: N/A	Grand Total \$148,698.00	
SUBMITTED BY: Woody Jones, Territory Manager		ACCEPTED BY: 	

10/19/2009

hendco930Haltbid.xls

Dealer	Interstate	Carolina Cat	Linder	Flint	Stafford	ASC
Make	JCB	Caterpillar	Komatsu	John Deere	Kawasaki	Construction
Model	426 HT	930H	WA250P-6	544K	70TMV-2	Volvo
Price	\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F \$157,252.00
BASIC SPECIFICATIONS						
Y____ N____	Engine rated net power shall be at least 150 hp (112 kW) according to SAE J1349.		149	140		
Y____ N____	Engine maximum net power shall be at least 160 hp (119 kW) according to SAE J1349.					
Y____ N____	Machine operating weight (including optional counterweight) shall be no less than 28,725 lb (13,029 kg).					
Y____ N____	Machine height shall be 10' 9" (3278 mm).	10' 11"		10' 8"		
Y____ N____	Machine overall length with standard general purpose bucket shall be 25' (7620 mm).					
Y____ N____	Machine width over tires shall be 8'5" (2570 mm) with 20.5-R25 L-3 tires.					8' 1"
Y____ N____	Machine wheelbase length shall be 9'6" (2900 mm).	9' 8"				
Y____ N____	Maximum turning radius over tire shall be 17'4" (5275 mm) with 20.5-R25 L-3 tires.	20' 7"				17' 7"
Y____ N____	Standard bucket struck capacity shall be 2.2 cubic yards (1.7 cubic meters).					
Y____ N____	Second bucket, Waste Handling with floor protection shall be 4.0 cubic yards (3.0 cubic meters).					
Y____ N____	Bucket will be specifically designed for refuse application.					
Y____ N____	Dump clearance at maximum lift and 45° dump angle shall be at least 9'7" (2927 mm).	9' 3"				
Y____ N____	Bucket clearance at maximum lift and level shall be at least 12'0" (3667 mm).	11' 11"				
Y____ N____	Minimum breakout force shall be 30,263 lb (13,727 kg) with 2.7yd (2.1m) hook on general purpose bucket.			18,699 lb		

Dealer		Interstate	Carolina Cat	Linder	Flint	Stafford	ASC
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Price		\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F
							\$157,252.00
BASIC SPECIFICATIONS							
ENGINE							
Y____ N____	Engine shall be manufactured by the equipment manufacturer.	Cummins				NO	
Y____ N____	Engine shall be EPA Tier III compliant, with Tier III compliance certificate shall be available upon request.						
Y____ N____	Emissions requirements shall meet or exceed worldwide requirements and be Tier III compliant.						
Y____ N____	Engine shall be six-cylinder, with electronically controlled fuel injection for precise timing.						
Y____ N____	Engine shall have dry cylinder liners.				Wet		
Y____ N____	Engine shall be direct injection turbocharged with turbocharger for reliability, durability and performance.						
Y____ N____	Engine shall have a high pressure common rail fuel system with an oil lubricated fuel pump.						
Y____ N____	Machine shall be standard with two 950 CCA maintenance free batteries mounted in bolt-on battery boxes.	850 CCA					760 CCA
Y____ N____	Fuel priming pump and fuel/water separator shall be standard.						
Y____ N____	Starting aid for improved starting in extremely cold temperatures shall be standard.						
Y____ N____	Machine shall have a standard 95 amp brushless alternator.	70 Amp				No	80 amp
Y____ N____	Machine shall have a standard backup alarm.						

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Price	\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F
						\$157,252.00
BASIC SPECIFICATIONS						
Y____ N____	Machine shall have a battery disconnect switch.					
Y____ N____	Machine shall use an air-to-air-aftercooler (ATAAC).					
Y____ N____	Engine shall have a 4 valve per cylinder crossflow head.					
Y____ N____	Machine shall use gear driven water and oil pumps.					
Y____ N____	Machine ECM shall automatically derate the engine for protection during overheating.					
Y____ N____	Engine and cooling compartments shall be completely separated.					
					No	
POWER TRAIN/TRANSMISSION						
Y____ N____	Transmission shall be manufactured by the equipment manufacturer.					
Y____ N____	Machine shall have a countershaft powershift transmission.					
Y____ N____	Machine shall have a forward/neutral/reverse switch standard on the implement control joystick.					
Y____ N____	Machine shall have four forward and four reverse speeds with a maximum of 23.8 mph (38.3 kph).					
Y____ N____	Transmission shall have manual and autoshift settings with variable shift (fuel economy) and power shift (aggressive loading) modes.					
Y____ N____	Joystick shall have a button for downshifting on demand.					
Y____ N____	Machine shall have ground accessible ports to sample engine and transmission oil.					

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Price		\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F
							\$157,252.00
BASIC SPECIFICATIONS							
Y____ N____	Machine shall have an operator programmable transmission neutralizer with an override switch standard.					No	
Y____ N____	Transmission shall utilize spur gears that are precision ground and heat treated for durability.			Hydrostatic Transmission			
Y____ N____	Transmission clutch pressure shall be electronically controlled.			Hydrostatic Transmission			
Y____ N____	Machine shall have transmission oil sight gauge and fill spout on the same side of the machine.						
STEERING							
Y____ N____	Steering articulation angle shall be 40°.						
Y____ N____	Machine shall have two steering cylinders.						
Y____ N____	Steering system shall use variable displacement load sensing piston pump.					No	
Y____ N____	High impact rubber steering stops..	X					
Y____ N____	Steering console and gauge panel shall be adjustable.						No
Y____ N____	Steering shall be controlled by steering wheel.						
BRAKES							
Y____ N____	Service brake shall feature completely closed and sealed standard inboard oil-immersed disc brakes on front and rear axles that are adjustment free.						
Y____ N____	Heavy duty rear brakes with integrated oil cooler shall be optional for high energy applications.		N/A				N/A
Y____ N____	Indicator light shall alert operator if brake pressure drops.						

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Price	\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F \$157,252.00

BASIC SPECIFICATIONS

Y____ N____	Machine shall have continually charged nitrogen accumulators to provide stopping capability after loss of engine power or equivalent.					
			N/A		No	
Y____ N____	Parking brake shall be mechanical, shoe-type mounted on driveline for positive manual operation. The transmission shall be automatically neutralized when parking brake is applied.					
Y____ N____	Dual suspended brake pedals shall function as a brake and transmission neutralizer so the operator can maintain high engine rpm for full hydraulic flow and fast cycle times.					

HYDRAULIC SYSTEM

Y____ N____	Hydraulic system shall be manufacturer designed and modular.					
Y____ N____	Minimum hydraulic output at 2300 engine rpm and 1,000 psi (6900 kPa) with SAE 10W oil at 150 ° F (65 ° C) shall be 58 gal/min (220 L/min).			50 gal/min		
Y____ N____	Maximum hydraulic cycle time shall be 9.5 seconds.				No	
Y____ N____	Maximum working pressure shall be 3,755 psi (25,900					
Y____ N____	Machine shall feature pilot safety valve to disable implement functions.				No	
Y____ N____	Implement hydraulics shall be load-sensing.					
Y____ N____	Low effort joystick control shall offer simultaneous lift and tilt functions.					
Y____ N____	Machine shall have pressure taps to allow quick diagnosis of complete hydraulic system.				No	
Y____ N____	Heavy duty hydraulic oil cooler.					
Y____ N____	Hydraulic couplings shall have O-ring face seals.					

AXLES

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Price		\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F
							\$157,252.00
BASIC SPECIFICATIONS							
Y____ N____	Axles shall be manufactured by the equipment manufacturer.						
Y____ N____	Front axle shall be rigidly mounted to the front loader frame.						
Y____ N____	Rear axle shall have an oscillation trunnion to allow the rear wheel to raise or drop a total of 16.6" (423 mm) with 17.5 tires				15.1		
Y____ N____	The rear axle shall oscillate +/-11 ° .						
Y____ N____	Rear axle shall have a remote trunnion lubrication fitting to simplify maintenance.						
Y____ N____	Front axle shall contain a means of locking the front differential with a foot pedal in the cab, without stopping the machine. Axle shall automatically stay locked until equal torque is sensed on both wheels.					No	
Y____ N____	Limited Slip Differentials shall be on rear axle.				Locking Rear Axle		
Y____ N____	Seals on the axle and housing shall keep oil in and lock contaminants out to prevent contamination of internal components.						
Y____ N____	Axles shall have Duo-cone seals or equivalent between brake and final drives.					No	
Y____ N____	Machine shall have axle seal guards standard.		No				
Y____ N____	Planetary final drives shall be lubricated from the main oil sump.						
WHEELS							
Y____ N____	Standard tire size shall be 20.5-25						
Y____ N____	Tires will be radial design.						

Dealer		Interstate	Carolina Cat	Linder	Flint	Stafford	ASC
Make		JCB	Caterpillar	Komatsu	John Deere	Kawasaki	Construction
Model		426 HT	930H	WA250P-6	544K	70TMV-2	Volvo
Price		\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F
							\$157,252.00
BASIC SPECIFICATIONS							
OPERATORS STATION							
Y____ N____	Machine shall have two (2) ingress/egress doors.				One full One Escape		One door
Y____ N____	Both doors shall latch open at 180 degrees.					No	90 degrees
Y____ N____	Personal storage areas shall include places to store a lunch box, thermos, cup, coat rack and a lockable storage area.						
Y____ N____	Hydraulic joystick control shall operate both lift and tilt functions. Joystick shall integrate transmission direction switch.						
Y____ N____	An additional joystick control shall also provide actuation of the third function on the joystick, for activation of all three functions simultaneously.						
Y____ N____	An Engine Speed Control feature shall be available to engine rpm can be set and maintained with a switch in the cab.						
Y____ N____	Seat shall be air- suspension and will include fully adjustable fore/aft position, seat back angle, bottom cushion height, armrest angle and suspension stiffness.						
Y____ N____	Seat shall include a 3" (75 mm) wide retractable seat belt.						
Y____ N____	Front and rear wipers with washers.						
Y____ N____	Steps leading up to the cab shall be wide and angled out for secure footing.						
Y____ N____	A 12V outlet for powering electronics.						

Dealer		Interstate	Carolina Cat	Linder	Flint	Stafford	ASC
Make		JCB	Caterpillar	Komatsu	John Deere	Kawasaki	Construction
Model		426 HT	930H	WA250P-6	544K	70TMV-2	Volvo
Price		\$134,644.00	\$143,628.00	\$146,730.00	\$144,200.00	\$180,549.00	L70F
							\$157,252.00
BASIC SPECIFICATIONS							
Y____ N____	Machine cab shall meet ROPS and FOPS criteria as well as regulations for sound exposure.						
Y____ N____	Machine shall have flat, fixed glass standard with optional sliding glass doors.						
Y____ N____	Rear window shall have an electric defroster.				Blown Air	No	None
Y____ N____	Glass panels shall extend from cab roof to floor allowing visibility to ground.			No		No	
Y____ N____	Machine shall have white-faced gauges including hydraulic, engine and transmission temperatures as well as fuel level.			No	No	No	No
Y____ N____	Warning/indicator and diagnostic functions shall include: Primary steering malfunction, electrical system voltage low, coolant temperature, engine oil pressure low, parking brake applied, brake charge pressure low, transmission oil temperature, transmission oil filter bypass, and hydraulic oil filter bypass.						
Y____ N____	Machine shall have a standard tool box.						
Y____ N____	AM/FM Radio CD player					No	
Y____ N____	Operators station shall expose the operator to sound pressure of no greater than 74 dB(A) per ANSI/SAE J1166 May 90 procedures to provide maximum operator safety.						
LOADER LINKAGE							
Y____ N____	Machine shall have a parallel lift linkage.				Bar		

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BASIC SPECIFICATIONS							
Y____	Linkage shall be the box						
N____	boom style loader arm.					No	No
Y____	High lift providing an			No	14.88"		
N____	additional 20" (508 mm) of						
	lift height over standard						
	boom.						
WORK TOOL OPTIONS							
Y____	Bucket lift circuit shall have						
N____	four positions: raise, hold,						
	lower and float.						
Y____	Controls shall be adjustable						
N____	from automatic kickout						
	horizontal to full lift.						
Y____	Tilt circuit shall have three						
N____	positions: tilt back, hold and						
	dump.						
Y____	An automatic bucket						
N____	positioner shall be available						
	that can be adjusted to						
	desired loading angle and						
	does not require visual						
	spotting.						
Y____	Quick coupler, cab						
N____	controlled.						
Y____	Cab controlled hydraulic						
N____	circuit for power					No	
	attachments.						
SERVICEABILITY							
Y____	Radiator and oil coolers shall						
N____	be separated.						
Y____	Machine shall have a						
N____	hydraulic oil sight gauge.						
Y____	All service points shall be						
N____	accessible from ground						
	level, on the same side of						
	the machine.						
Y____	Machine shall have ground						
N____	level valve access.						
Y____	Radiator coolant and						
N____	transmission and hydraulic						
	oil levels shall have sight						
	gauges.						
Y____	Spin on filters for engine oil						
N____	and hydraulic oil shall be						
	vertically mounted for easier						
	servicing.						

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BASIC SPECIFICATIONS							
Y____	Fuel tank shall have a 59.2						
N____	gal (224 L) capacity.			49.1			
Y____	Cooling system shall have a						
N____	7.9 gal (29.9 L) capacity.			5.8	6 gal		
Y____	Crankcase shall have a 5						
N____	gal (18.9 L) capacity.		4.2 gal				
Y____	Transmission shall have a						
N____	9.1 gal (34.5 L) capacity.				4.87 gal		5.3 gal
Y____	Hydraulic system (including						
N____	tank) shall have a 39 gal			Hydrostatic			35 Gal
Y____	Hydraulic tank shall have a						
N____	18.5 gal (70 L) capacity.			17.7			
Y____	Front differential and final						
N____	drive shall be 6.9 gal (26 L).						
	Rear differential and final						
	drive shall be 6.6 gal (25 L).			4.8	4.5		No
OWNING AND OPERATING COSTS							
Y____	Extended Life						
N____	Coolant/Antifreeze shall						
	allow for up to 6,000 hours				5,000		
Y____	Machine shall have a factory						
N____	recommended oil change						
	interval of 500 hours.						
Y____	With required oil sampling,						
N____	hydraulic oil shall have a						
	4,000 hour change interval.						
Y____	Machine shall have a factory						
N____	recommended 1,000 hour						
	hydraulic filter change.						
Y____	Machine shall have a						
N____	minimum drain interval of						
	2,000 hours for transmission		1,000 hr				
Y____	Machine shall have service						
N____	interval of a 500 hour engine						
	oil change.						
ADDITIONAL FEATURES							
Y____	Steel fenders shall be				Composite		
N____	standard.				Material		

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BASIC SPECIFICATIONS							
Y____ N____	Waste package providing guards for windows, steering, drive train and axles.		Partial				
Y____ N____	Waste package providing guards for crankcase, powertrain, and driveshaft.						
Y____ N____	Waste package providing guards for windshield, radiator, and lights.						
Y____ N____	Cab shall have options for customizing including: 12V converter, radio installation package, sun visor for windshield, external mirror package, and auxiliary lighting packages.						
Y____ N____	Cooling compartment shall be completely enclosed to limit sound emissions.						
Y____ N____	Air conditioning system shall utilize R-134a refrigerant which does not contain CFCs (chlorofluorocarbons).						
Y____ N____	All major components shall be designed to be rebuilt and reused.						
Y____ N____	Equipment must be accompanied by a factory recommended						
	preventative maintenance schedule including procedures, mileage/hour intervals, pre- placement part numbers and fluid specifications.						
WARRENTY							
Y____ N____	Twelve month/2,000 hour complete warranty						
Y____ N____	Sixty month/7,500 hour powertrain warranty	Optional					
Y____ N____	Sixty month/7,500 hour hydraulic warranty	Optional					

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BASIC SPECIFICATIONS						
	Warranty	Fusion Coupler	High Lift			
	\$4,850.00	\$5,060.00	\$8,200.00			