



## INVITATION FOR SEALED BID

**BID 01-323**

**Description: 21 ft. MID-MOUNTED ARTICULATED BOOM MACHETE &  
HEAVY DUTY FRONT AXLE  
– to be installed on a Ford 6640 Tractor  
Department: PARKS & REC.  
NIGP Commodity Code(s):020-64-00-000-0**

**Total pages including this page is 14**

**NOTE: FAXED BIDS WILL NOT BE ACCEPTED.**

**Important Instruction - Read Carefully:**

**If you have obtained these bid specifications from either of:  
City of Tulsa's Fax-on-Demand (918-596-1171) or  
City of Tulsa's Website : [www.cityoftulsapurchasing.org](http://www.cityoftulsapurchasing.org)**

**you must notify the buyer LARRY HOOD of your intent to bid by  
e-mail [lhood@ci.tulsa.ok.us](mailto:lhood@ci.tulsa.ok.us) in order to receive addenda. The buyer  
will always acknowledge your e-mail for your records. All addenda  
will be posted on fax-on-demand and the website.**

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**Pay special attention to those pages with a reference to the following notes:**

**Note #1: Signature of an authorized agent required**

**Note #2: Signature of an authorized agent and notary required**

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**Your bid response should follow the same format listed above plus any additional information requested in the body of the bid invitation.**

**INVITATION FOR SEALED BIDS  
TO  
City of Tulsa**

200 CIVIC CENTER, ROOM 109, TULSA, OKLAHOMA 74103

Bid number and date of bid opening must appear on the lower  
left outside corner of bid envelopes and all related containers.

**DATE OF OPENING: March 7, 2002**

**BID NUMBER: 01-323**

**BID MUST BE IN THE CITY CLERK'S OFFICE AT THE ABOVE ADDRESS BY 5:00 P.M. THE DAY PRECEDING THE "DATE OF OPENING" SHOWN ABOVE.**

**BIDS WILL BE OPENED AT 8:30 A.M. IN THE CITY COUNCIL ROOM ON THE DAY SPECIFIED UNDER "DATE OF OPENING."**

PUBLISHED IN THE TULSA DAILY COMMERCE AND LEGAL NEWS: February 26, 2002

Bid must be accompanied by bidder's bond, cashier's check or certified check in the amount of: **NOT REQUIRED**

PLEASE READ TERMS AND CONDITIONS ON THE NEXT PAGE BEFORE COMPLETING BID DOCUMENTS

\*\*\*\*\* **THE FOLLOWING SECTION MUST BE COMPLETED BY BIDDER** \*\*\*\*\*

Delivery will be made in not more than \_\_\_\_\_ days after receipt of order.

Payment terms \_\_\_\_\_ % \_\_\_\_\_ days.

City of Tulsa may increase quantity of order at the unit price bid for \_\_\_\_\_ days. (Bidder to Specify Days) I have examined the terms and specifications and the instructions to bidders herein and agree, provided I am awarded a contract, to provide the above described items for the sum shown in accordance with the terms and specifications stated herein. All deviations are in writing and attached hereto.

Enclosed is a  BID BOND ;  CASHIER'S CHECK;  Certified Check in the amount of \$ \_\_\_\_\_, which I agree the City of Tulsa may retain as liquidated damages in the event of my failure to comply with the terms of this bid.

**MUST BE SIGNED BY AUTHORIZED AGENT TO BE VALID**

FIRM NAME \_\_\_\_\_ by \_\_\_\_\_

STREET \_\_\_\_\_ TITLE \_\_\_\_\_

CITY STATE \_\_\_\_\_ ZIP CODE \_\_\_\_\_ PHONE NUMBER \_\_\_\_\_ DATE \_\_\_\_\_

## GENERAL TERMS AND CONDITIONS OF SEALED BIDS

THESE ITEMS APPLY TO AND BECOME A PART OF THE BID.

### NO EXCEPTIONS TO THESE TERMS & CONDITIONS WILL BE CONSIDERED.

1. **BIDS MUST BE SUBMITTED ON THIS FORM ONLY INCLUDING A SIGNATURE OF AN AUTHORIZED AGENT.** Each bid shall be placed in a separate envelope. Be sure envelope is completely and properly identified and sealed, showing the bid number and date in the lower left hand corner. Bids must be time stamped in the office of the City Clerk by 5:00 P.M. on the day before date of opening.
2. No bidder may withdraw his proposal for a period of thirty (30) days after the date and hour set for the opening of bids.
3. All prices shall be quoted F.O.B. Tulsa, Oklahoma, and delivery to City of Tulsa location shall be without additional charge.
4. The bidder shall attach the manufacturer's name of the equipment or material to be furnished, type, model numbers, manufacturer's descriptive bulletins and specifications. All guarantees and warranties should be clearly stated. This data shall be in sufficient detail to describe accurately the equipment or material to be furnished. Manufacturer's specifications, in respect to the successful bidder, shall be considered as part of his contract with the City of Tulsa.
5. The bidder shall show in the proposal both the unit prices and total amount, where required, of each item listed. In the event of error or discrepancy in the mathematics, the unit prices shall prevail.
6. Any exceptions or deviations from written specifications shall be shown in writing and attached to the bid form.
7. Each bidder agrees to comply with the terms of Title 5, Chapter 1, of Tulsa, Oklahoma Charter and revised ordinances relating to equal employment opportunity.
8. **THE ENCLOSED FORMS REGARDING NON-COLLUSION AND FINANCIAL INTEREST MUST BE SIGNED, NOTARIZED, AND RETURNED WITH THE BID.**
9. The City of Tulsa reserves the right to reject any and all bids, to waive any technicalities in the bidding, and to award each item to different bidders or all items to a single bidder.
10. All bids must be accompanied by bidders bond, cash, certified or cashier's check in the amount shown on the face of the bid form. This amount shall be retained by the City of Tulsa as liquidated damages in the event the successful bidder (or bidders) fails to execute a contract, if required. The bidder agrees that said amount is presumed to be the damages sustained by the City due to the impracticability and extreme difficulty in fixing the actual damages. The office of the City Clerk will return the bid deposits to the unsuccessful bidders, after a contract has been awarded or all bids have been rejected.
11. In the event cash discounts are offered by the bidder, the discount date shall begin with the date of invoice, the date of receipt of all material covered by the purchase order, or the date of receipt by the City of Tulsa of the original copy of the purchase order with properly executed Affidavit of Claimant, whichever is the later date.
12. Direct purchase of certain items of equipment or material by the City of Tulsa is exempt from Federal Excise Tax and Oklahoma Sales Tax. In such cases the bidder shall quote prices which do not include Federal Excise Tax and Oklahoma Sales Tax. The City of Tulsa will furnish executed exemption certificates upon presentation by the bidder at the time of purchase.
13. Bid must show number of days required for delivery under normal conditions. Failure to state delivery time obligates bidder to complete delivery in fourteen (14) calendar days. Unrealistically short or long delivery promises may cause bid to be disregarded. Contractor must keep Purchasing Department advised at all times of status of order. Default in promised delivery or failure to meet specifications authorizes the Purchasing Agent to purchase supplies elsewhere and charge full increase of cost and handling to defaulting contractor. Consistent failure to meet delivery promises without valid reason may cause removal from bid list.
14. Bidder agrees to defend and save City of Tulsa from and against all demands, claims, suits, costs, expenses, damages and judgments based upon infringement of any patent relating to goods specified in this order or the ordinary use or operation of such goods by City or use or operation of such goods in accordance with bidders direction.
15. If the bid requires a written contract, the successful bidder shall execute a written contract with the City of Tulsa and return the required bonds and insurance certificates within ten (10) days after submission of contracts to said bidder by the City.

**INTEREST AFFIDAVIT**

STATE OF \_\_\_\_\_ }  
  } } ss  
COUNTY OF \_\_\_\_\_ }

\_\_\_\_\_, of lawful age, being first duly sworn, states that s(he) is the agent authorized by the bidder to submit the attached bid. Affiant further states that no officer or employee of the City of Tulsa either directly or indirectly, owns a twenty-five percent (25%) interest in the bidder's business or such a percentage which constitutes a controlling interest. Affiant further states that the following officers and/or employees of the City of Tulsa have some direct or indirect interest in the bidder's business:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By \_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_

NOTARY PUBLIC SIGNATURE

My Commission Expires:

\_\_\_\_\_

**The Interest Affidavit must be completed, signed by an authorized agent, and notarized.**

# BIDDER AFFIDAVIT - TITLE 74 O.S. (1974 SUPP.) 85.22-85.25

STATE OF \_\_\_\_\_ COUNTY OF \_\_\_\_\_

\_\_\_\_\_, of lawful age, being first duly sworn on oath says

**Authorized Agent**

1. (s)he is the duly authorized agent of \_\_\_\_\_, the bidder submitting the competitive bid which is attached to this statement, for the purpose of certifying the facts pertaining to the existence of collusion among bidders and between bidders and municipal officials or employees, as well as facts pertaining to the giving or offering of things of value to government personnel in return for special consideration in the letting of any contract pursuant to the bid to which this statement is attached.
2. (s)he is fully aware of the facts and circumstances surrounding the making of the bid to which this statement is attached and has been personally and directly involved in the proceedings leading to the submission of such bid; and
3. neither the bidder nor anyone subject to the bidder's direction or control has been a party;
  - a. to any collusion among bidders in restraint of freedom of competition by agreement to bid at a fixed price or to refrain from bidding,
  - b. to any collusion with any municipal official or employee as to quantity, quality or price in the prospective contract, or as to any other terms of such prospective contract, nor
  - c. in any discussions between bidders and any municipal official concerning exchange of money or other thing of value for special consideration in the letting of a contract.

\_\_\_\_\_  
SIGNATURE OF AUTHORIZED AGENT

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Signature of Notary Public

\_\_\_\_\_  
MY COMMISSION EXPIRES

**The Bidder Affidavit must be completed, signed by an authorized agent, and notarized.**

# CONTRACTOR/BIDDER INFORMATION SHEET

To be completed by all Bidders  
For Contracts with the City of Tulsa  
(Please print or type)

Project No. or Description \_\_\_\_\_  
\_\_\_\_\_

Full Name of Bidder \_\_\_\_\_

Legal Identity  
(Corporation, Partnership,  
Individual, etc.) \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

Telephone No. \_\_\_\_\_

FAX No. \_\_\_\_\_

Taxpayer Identification Number \_\_\_\_\_

Contact Person \_\_\_\_\_

Phone No. \_\_\_\_\_

Fax No. \_\_\_\_\_

E-mail address \_\_\_\_\_

Webpage Address \_\_\_\_\_

# Price Sheet Summary

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Vendor Name: \_\_\_\_\_ Signature: \_\_\_\_\_  
Date: \_\_\_\_\_

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**You will be able to obtain a copy of the Bid Summary on the City of Tulsa's Purchase-Net Fax-on-Demand and Website shortly after bid opening.**

ONE (1) OR MORE 21ft MID-MOUNTED ARTICULATED BOOM MACHETE & HEAVY DUTY FRONT AXLE - to be installed on a Ford 6640 tractor AS SPECIFIED:

\$ \_\_\_\_\_ EACH\*

MAKE AND MODEL: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\* DELIVERED COST.

**21ft. MID-MOUNTED ARTICULATED BOOM MACHETE & HEAVY DUTY FRONT AXLE**  
- TO BE INSTALLED ON A FORD 6640 TRACTOR  
**NIGP CODE 020-64-00-000-0**  
**PARKS & REC. DEPARTMENT**

**INTENT**

THE INTENT OF THESE SPECIFICATIONS IS TO SET MINIMUM REQUIREMENTS, NOT TO OTHERWISE LIMIT BIDDING, FOR THE SUPPLY **OF ONE(1) OR MORE 21 FT. MID-MOUNTED ARTICULATED BOOM MACHETE & HEAVY DUTY FRONT AXLE PER SPECIFICATIONS ATTACHED.**

INASMUCH AS SOME DESIGNS OF EQUIPMENT VARY AMONG DIFFERENT MANUFACTURERS, THE CITY MAY ACCEPT BIDS ON EQUIPMENT WITH MINOR DEVIATIONS TO THE WRITTEN SPECIFICATIONS. GENERALLY, A MINOR DEVIATION IS DEFINED AS A DEVIATION WHICH DOES NOT: (A) MATERIALLY AFFECT THE ABILITY OF THE PRODUCT TO ACHIEVE OR ACCOMPLISH A NECESSARY FUNCTION OR TASK IN THE MANNER REQUIRED BY THE SPECIFICATIONS; (B) COMPROMISE THE SAFETY OF THE USER THEREOF; AND, (C) PRODUCE HIGHER LATENT OR PATENT COSTS TO THE CITY IN ANY OF A MULTIPLICITY OF WAYS. THE CITY OF TULSA SPECIFICALLY RESERVES THE RIGHT TO MAKE THE FINAL JUDGMENT CONCERNING WHAT IS OR IS NOT A MINOR DEVIATION AND TO AWARD THE BIDDER(S) WHOSE BID(S) BEST SUIT THE CITY'S NEED FOR THE PRODUCT BEING PURCHASED.

**METHODS OF SAMPLING, INSPECTIONS & TESTS**

1. AFTER BID RESULTS ARE TABULATED, THE CITY OF TULSA PURCHASING DIVISION RESERVES THE RIGHT TO REQUIRE SAMPLES OF SELECTED EQUIPMENT AND/OR PRODUCTS FOR INSPECTION AND EVALUATION.
2. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR PURCHASE ORDER, THE SUPPLIER SHALL BE RESPONSIBLE FOR THE PERFORMANCE OF ALL INSPECTION AND TEST REQUIREMENTS NECESSARY TO INSURE COMPLIANCE WITH REQUIREMENTS FOR THIS SPECIFICATION. THIS DOES NOT PRECLUDE SUBSEQUENT INSPECTION AND TESTIMONY BY THE CITY OF TULSA TO FURTHER DETERMINE CONFORMANCE WITH SPECIFICATION REQUIREMENTS OF QUALITY STANDARDS OF WORKMANSHIP, MATERIAL AND CONSTRUCTION TECHNIQUE.

**ADDENDA AND INTERPRETATIONS**

IF IT BECOMES NECESSARY TO REVISE ANY PART OF THIS BID, A WRITTEN ADDENDUM WILL BE PROVIDED TO ALL THE BIDDERS. THE CITY OF TULSA IS NOT BOUND BY ANY ORAL REPRESENTATION, CLARIFICATIONS OR CHANGES MADE IN THE WRITTEN SPECIFICATIONS BY CITY OF TULSA EMPLOYEES UNLESS SUCH CLARIFICATION OR CHANGE IS PROVIDED TO BIDDERS IN WRITTEN ADDENDUM FORM FROM THE PURCHASING DIVISION.

**ALTERING BIDS**

BIDS CANNOT BE ALTERED OR AMENDED AFTER SUBMISSION DEADLINE. ANY INTERLINEATION, ALTERATION, OR ERASURE MADE BEFORE OPENING TIME AND DATE MUST BE INITIALED BY THE SIGNER OF THE BID, GUARANTEEING AUTHENTICITY. BIDS MUST BE SUBMITTED IN INK OR TYPEWRITTEN, PENCILING WILL NOT BE ACCEPTED

## **DESCRIPTIVE LITERATURE**

EACH BIDDER IS REQUIRED TO FURNISH WITH THEIR BID, CATALOG CUTS AND/OR DESCRIPTIVE LITERATURE, PROPERLY LABELED WITH THE BID NUMBER AND BIDDER'S NAME, WITH FULL ILLUSTRATIONS AND DETAILED SPECIFICATIONS FOR EACH ITEM OFFERED AS EQUAL TO THE BRAND NAME SPECIFIED. IN ADDITION, **ALL DIFFERENCES IN SPECIFICATIONS FROM THE SPECIFICATIONS STATED HEREIN MUST BE SO MARKED.** DESCRIPTIVE LITERATURE IS REQUIRED TO ESTABLISH, FOR THE PURPOSE OF BID EVALUATION AND AWARD, DETAILS OF THE PRODUCT(S) THE BIDDER PROPOSES TO FURNISH AS TO DESIGN, MATERIALS, METHOD OF MANUFACTURE, CONSTRUCTION, ASSEMBLY OR OPERATION, AS APPROPRIATE. **FAILURE TO SUBMIT THE DESCRIPTIVE LITERATURE MAY BE CAUSE FOR REJECTION OF YOUR BID.**

## **AMERICANS WITH DISABILITIES ACT**

THE CONTRACTOR SHALL TAKE THE NECESSARY ACTIONS TO ENSURE ITS FACILITIES AND EQUIPMENT ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT. IT IS UNDERSTOOD THAT THE PROGRAM OF THE CONTRACTOR IS NOT A PROGRAM OR ACTIVITY OF THE CITY OF TULSA. THE CONTRACTOR AGREES THAT ITS PROGRAM OR ACTIVITY WILL COMPLY WITH THE REQUIREMENTS OF THE ADA. ANY COSTS OF SUCH COMPLIANCE WILL BE THE RESPONSIBILITY OF CONTRACTOR. UNDER NO CIRCUMSTANCES WILL CONTRACTOR CONDUCT ANY ACTIVITY WHICH IT DEEMS TO NOT BE IN COMPLIANCE WITH THE ADA.

## **BIDDER'S PROPOSAL COLUMN**

BIDDER SHALL COMPLETE EVERY SPACE IN SECTION 2, BIDDER'S PROPOSAL COLUMN. THE BIDDER SHALL GIVE A COMPLETE DESCRIPTION OF THE ITEM BEING BID SUCH AS, SIZES, CAPACITIES, DIMENSIONS, ETC. **MARKINGS SUCH AS CHECKS AND BLANK SPACES WILL BE CONSIDERED AS NON-RESPONSIVE AND REASON FOR REJECTION**

## **EMPLOYMENT DISCRIMINATION BY CONTRACTOR PROHIBITED**

A. DURING THE PERFORMANCE OF THIS CONTRACT, THE CONTRACTOR AGREES AS FOLLOWS:

(1) THE CONTRACTOR WILL NOT DISCRIMINATE AGAINST ANY EMPLOYEE OR APPLICANT FOR EMPLOYMENT BECAUSE OF RACE, RELIGION, COLOR, SEX OR NATIONAL ORIGIN, EXCEPT WHERE RELIGION, SEX OR NATIONAL ORIGIN IS A BONA FIDE OCCUPATIONAL QUALIFICATION REASONABLY NECESSARY TO THE NORMAL OPERATION OF THE CONTRACTOR. THE CONTRACTOR AGREES TO POST IN CONSPICUOUS PLACES, AVAILABLE TO EMPLOYEES AND APPLICANTS FOR EMPLOYMENT, NOTICES SETTING FORTH THE PROVISION OF THIS NON-DISCRIMINATION CLAUSE.

(2) THE CONTRACTOR, IN ALL SOLICITATIONS OR ADVERTISEMENTS FOR EMPLOYMENT PLACED BY OR ON BEHALF OF THE CONTRACTOR, WILL STATE THAT SUCH CONTRACTOR IS AN EQUAL OPPORTUNITY EMPLOYER.

(3) NOTICES, ADVERTISEMENTS AND SOLICITATIONS PLACED IN ACCORDANCE WITH FEDERAL LAW, RULE OR REGULATION SHALL BE DEEMED SUFFICIENT FOR THE PURPOSE OF MEETING THE REQUIREMENTS OF THIS SECTION.

B. THE CONTRACTOR WILL INCLUDE THE PROVISION OF THE FOREGOING PARAGRAPHS OF THIS SECTION IN EVERY SUBCONTRACT OR PURCHASE ORDER OF OVER \$10,000, SO THAT THE PROVISIONS WILL BE BINDING UPON EACH SUBCONTRACTOR OR VENDOR.

## **AWARD OF BID**

THE BID SHALL BE AWARDED TO THE FIRM WHOSE PROPOSAL IS RESPONSIVE TO THE BID AND IS MOST ADVANTAGEOUS TO THE CITY, CONSIDERING THE FACTORS IDENTIFIED IN THE BID AND SECTION 406E OF TITLE 6, THE PURCHASING ORDINANCE SET FORTH BELOW:

E. AWARD OF CONTRACT.

1. AUTHORITY OF MAYOR. THE MAYOR SHALL HAVE THE AUTHORITY TO AWARD CONTRACTS WITHIN THE PURVIEW OF THIS CHAPTER.

2. LOWEST SECURE BIDDER. CONTRACTS SHALL BE AWARDED TO THE LOWEST SECURE BIDDER MEETING SPECIFICATIONS. IN DETERMINING "LOWEST SECURE BIDDER", IN ADDITION TO PRICE, THE FOLLOWING FACTORS SHALL BE CONSIDERED:

A. THE ABILITY, CAPACITY AND SKILL OF THE BIDDER TO PERFORM THE CONTRACT OR PROVIDE THE SERVICE REQUIRED;

B. WHETHER THE BIDDER CAN PERFORM THE CONTRACT OR PROVIDE THE SERVICE PROMPTLY OR WITHIN THE TIME SPECIFIED, WITHOUT DELAY OR INTERFERENCE;

C. THE CHARACTER, INTEGRITY, REPUTATION, JUDGMENT, EXPERIENCE AND EFFICIENCY OF THE BIDDER;

D. THE QUALITY OF PERFORMANCE OF PREVIOUS CONTRACTS OR SERVICES;

E. THE PREVIOUS AND EXISTING COMPLIANCE BY THE BIDDER WITH LAWS AND ORDINANCES RELATING TO THE CONTRACT OR SERVICE;

F. THE SUFFICIENCY OF THE FINANCIAL RESOURCES AND ABILITY OF THE BIDDER TO PERFORM THE CONTRACT OR PROVIDE THE SERVICE;

G. THE QUALITY, AVAILABILITY AND ADAPTABILITY OF THE SUPPLIES OR CONTRACTUAL SERVICES TO THE PARTICULAR USE REQUIRED;

H. THE ABILITY OF THE BIDDER TO PROVIDE FUTURE MAINTENANCE AND SERVICE FOR THE USE OF THE SUBJECT OF THE CONTRACT, AND;

I. WHERE AN EARLIER DELIVERY DATE WOULD BE OF GREAT BENEFIT TO THE REQUISITIONING AGENCY, THE DATE AND TERMS OF DELIVERY MAY BE CONSIDERED IN THE BID AWARD, AND;

J. THE NUMBER AND SCOPE OF CONDITIONS ATTACHED TO THE BID.

K. IF A POINT SYSTEM HAS BEEN UTILIZED IN THE BID SPECIFICATIONS, THE NUMBER OF POINTS EARNED BY THE BIDDER.

### **BID DOCUMENTS**

**BIDDER SHALL RETURN ALL BID DOCUMENTS (14 PAGES) INTACT EXACTLY AS FURNISHED IN IT'S ORIGINAL FORM. ALL BID DOCUMENTS REQUIRING SIGNATURE MUST BE SIGNED BY AN AUTHORIZED AGENT OF THE COMPANY BIDDING. PRINTING YOU NAME IN LIEU OF SIGNATURE WILL NOT BE ALLOWED. FAILURE TO COMPLY WILL RESULT IN REJECTION OF YOUR BID.**

**NOTE: FOR EACH LINE ON THE FOLLOWING SPECIFICATION, YOU MUST LIST YOUR PART NUMBERS (AND DESCRIPTIONS) FOR THE ITEMS YOU ARE PROPOSING TO FILL EACH REQUIREMENT. ATTACH ADDITIONAL DOCUMENTATION AS NEEDED TO SHOW THAT YOU MEET OUR SPECIFICATION.**

**The Boom Mower must be able to mount on a 1996 Ford 6640SL Tractor  
Also must Include a Heavy Duty Front Axle (60 Series)  
And to include the installation of both onto the tractor  
Tractor S/N BD86997 / Unit # 4H24B**

**21' MID-MOUNTED, ARTICULATED BOOM MACHETE**

It is the purpose of this specification to describe a mounted, articulated, hydraulically-powered boom mower cutting grass and brush on roadsides and other areas that are not accessible to conventional mowing equip.

The *unit* bid shall be the manufacturer's current production that meets or exceeds the following minimum specifications. Only a standard production machine can be bid on these specifications and a supplier will not be allowed to modify his standard production *unit* in order to meet these specifications.

**Frame:**

Mounting rail framework shall be full-length 4" x 4" x 1/4" steel tubing mounted to the front bolster housing and to the rear axle. (Specifically excluding framework bolting to the bell housing of the tractor.)

Mainframe shall be no less than a 4" x 4" x 1/4" steel tubing bracing frame with 4" x 6" x 3/16" steel tubing main structure mounted over the hood of the tractor to the 4" x 4" mounting rails.

Shall have a minimum counterweight of 1300 lb.

**Hydraulic Reservoir:**

Shall have a front mounted reservoir for improved operator visibility, safety, and operator access. (Side mounted tanks will not be accepted.)

Shall have a maximum 17-gallon reservoir with a built-in oil level sight glass and thermometer.

**Filter:**

Shall have a maximum of a 10 micron filter with an ISO cleanliness code of 18/13 and a full flow of 35 GPM

**King Post:**

Shall have two 2-1/2" ill Teflon impregnated bearings with two 2-1/2" dia. chrome plated pins.

Shall have a 5" dia. x 1/4" thick UHMW polyethylene thrust washer.

Shall have a minimum total bearing area of 59 sq. in.

**Boom Arm:**

Shall be of a two-piece design with all pivot points having replaceable Teflon bearings.

All pivot pins shall be a minimum of 1-1/2" in diameter.

The inner boom shall be made of a minimum of 6" x 6" x 114" wall steel tubing, 50,000 lb./ sq. in. yield strength.

The dipper shall be made of a minimum of 5" x 5" x 1/4" wall steel tubing, 50,000 lb./ sq. in. yield strength.

All hinge points shall use T -I steel for reinforcement.

Horizontal boom swing shall be a minimum of a 125-degree swing hydraulically operated.

The swing cylinder shall be mounted in such a way that the breakaway forces are transmitted to the barrel side of the cylinder and not the rod side.

**Boom Reach:** (with 60" Machete head)

The minimum reach up shall be 21' 7".

The minimum reach out shall be 21' 3".

The minimum reach down shall be 12' 10" below tractor ground level.

Boom mower head shall be able to mow within 21 1/2" of the rear tractor tire.

(Note: All measurements are based on a 96" outside tire spread with 18.4 x 30 tires.)

Shall use four-bar linkage to allow 205 degree head rotation.

**Hydraulics:**

Shall have a closed loop hydrostatic piston pump rated at 46 GPM at 3600 rpm and 5000 PSI.

The front pump shall be idle during transport.

Drive shaft assembly to the pump shall be rated at a minimum of 371 ft. lb. of torque.

All motor circuit hoses shall be a minimum of 1" four wire braid with an SAE rating of I 00R 12.

The dipper boom hoses shall be of metal tubing and fasten to the inside of the boom.

The inner boom hoses shall be metal tubing and fasten to outside and back of the boom.

The mower deck hoses shall be of a four-wire braid SAE IOOR12 fitted with Cordura sleeving for protection, against the brush.

**Cylinder Valve:**

The cylinder valve shall be a five-spool, electronic, proportional, pressure-compensating type with a main relief

The valve shall allow a minimum of four functions simultaneously.

The swing, lift, and dipper sections have individual work port relief valves to give individual breakaway protection.

**Boom Controls:**

All five functions of the valve shall be controlled through a single electronic joystick.

**Safety:**

The mower cutter bar shall have a 6 second emergency shut down.

The mower head motor shall take 6 seconds to wind up to full RPM for a "no-shock-load start-up."

**Safety Cage:**

A safety cage shall be installed on the right side and top of the operator's position on a ROPS tractor and on the right side of a canopy tractor.

This cage shall be constructed of expanded metal and permanently mounted to the tractor.

**Boom Rest:**

A boom rest shall be mounted to the rear axle or to the mower frame to cradle the boom when it is in transport position.

The rest shall take pressure off the lift, dipper, and cylinders when it is in transport .

## **Boom Rotary Brush Head**

### **Deck:**

Shall have a minimum cutting width of 60".

The top deck shall be a minimum of A606 alloy steel or equivalent.

The side skirts shall be a minimum of 3/8".

Top of the deck shall be reinforced with channel frame with a reinforced spindle mount plate.

Shall have replaceable full-length skid shoes.

### **Spindle:**

Shall be a minimum of 4-1/2" x 9" heat-treated H-11 modified alloy tool steel.

Spindle bearing shall be tapered roller bearings 2-1/2" ID top and 2-5/8" ID bottom in a sealed housing.

### **Motor Drive:**

Shall be direct drive, splined and totally in closed drive, and excluding chain couplers or flex couplers.

### **Blade Bar:**

Shall use a three-leaf, stacked blade bar with the bottom leaf being made out of T -1 steel.

### **Blades:**

Shall be full swing (360 degrees) , double edged, tempered steel that are 5/8" x 5" x 14-5/8".

Shall use 1-1/8" x 3" heat-treated, grade 8 shoulder bolt with a castel nut and roll pin.

### **Motor:**

Shall be a cast iron piston type motor rated at 199 HP at 4100 RPM and 6000 PSI.

The spindle speed shall be a minimum of 1220 RPM and 4916 in. lb.of torque.

### **Safety Shields: -**

The front shield shall be hydraulically actuated, center feed, metal door. Operational from the operators Joystick control.

The rear shield shall be no less than rubber/fabric material.

### **Optional Heads:**

FML100 48" Flail Axe

### **Optional Equipment:**

Lexan safety screen special paint