



## **KB2300 BOOM**

### **FLORIDA SHERIFF'S CONTRACT SPECIFICATION**

It is the purpose of this specification to describe a 23' mid-mounted, hydraulically powered boom mower for cutting grass and brush on roadsides and other areas that are not accessible to conventional mowing equipment. The unit bid shall be the manufacturer's current production model 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.

#### ***BASIC FEATURES***

- 23' minimum horizontal reach.
- 20' minimum vertical reach.
- 9' 7" below grade reach.
- Two section articulated boom.

#### ***BOOM FEATURES & MOUNTING***

- Main Boom: 6" x 6" x 1/4" wall structural tubing conforming to ASTM A-500 Gr. B (58,000 psi min tensile).
- Outer Boom: 5" x 5" x 1/4" wall structural tubing conforming to ASTM A-500 Gr. B (58,000 psi min tensile).
- The main boom pivot points shall be reinforced with 3/4" ASTM A-572 Gr. 50 (65,000 psi min tensile).
- Main pivot pins shall be constructed of 2" ETD 150 alloy steel bar (150,000 psi min tensile/32 Rc min).
- Each pin shall be supported by a pair of 3" hardened steel, greaseable Connex® bushings.
- Standard boom functions shall include horizontal swing, vertical lift, dipper reach, and mower head tilt.
- The boom must swing hydraulically a minimum of 180° from front to rear utilizing a turret-style mechanism.
- The turret shall rotate on a 20" greaseable, slewing ring bearing by means of dual trunnion-style cylinders.
- The tilt mechanism shall feature four-bar linkage to allow for 215° mowing head rotation.
- The tractor mount kit shall feature a subframe spanning from the bolster to the mid-chassis on both sides.
- The subframe shall measure a minimum of 60" long and be constructed from 3/4" hot-rolled steel plate.
- The mainframe which supports the turret will suspend from the subframe and two tubular, rear axle mounted rails.
- Torsional loading shall be minimized with a cross-brace between the tubular rails and the drawbar mount.
- No framework shall extend above or cross over the hood hindering the operator's line of sight.
- A minimum 2,400 lb counterweight shall be fastened to the mainframe opposite the boom.
- An additional 1,300 lb wheel weight shall be provided as standard equipment.
- A two-piece boom rest structure shall mount to the rear axle to support the weight of the boom in transport.

#### ***HYDRAULIC SYSTEM***

- Unit shall feature a self-contained hydraulic circuit for both mowing head and boom control.
- Mowing head circuit shall feature a gear-type pump rated at 40 gpm (70 hp) and 3,000 psi @ 2,200 rpm.
- Boom control circuit shall feature a gear-type pump rated at 12 gpm (21 hp) and 3,000 psi @ 2,200 rpm.
- The dual section pump shall be mounted to the front of the tractor and coupled to the engine crankshaft pulley.
- The driveline shall be constructed of 1" SAE 8620 CF allow steel with an external 1"-15 spline on either end.
- The driveline shall be carburized and hardened to Rc 60-62 to .030" deep.
- The hydraulic reservoir shall be front-mounted for improved operator visibility, safety, and operator access.
- The in-tank return filter shall be 10-micron with a 95-GPM full-flow with restriction gauge.
- The suction line filter shall be 100-mesh.
- The hydraulic system shall feature an oil-to-air cooler with integrated electric fan located beyond the reservoir.
- Reservoir shall feature visual indication of tank level and temperature to insure a 20 gallon working volume.
- Convenient access points for draining and cleaning the reservoir shall be provided.
- A heavy duty steel bumper shall provide frontal protection for the reservoir.

### ***HYDRAULIC SYSTEM (continued)***

- The cylinder control circuit shall feature a multi-section, electro-hydraulic, directional valve.
- The valve shall be open-center and provide section-specific pressure compensation.
- Valve shall allow a minimum of four functions to be operated simultaneously by joystick control.
- The swing, lift and dipper sections must feature individual work port relief valves for breakaway protection.
- The valve shall be mounted on the oil reservoir and protected by a hinged fiberglass cover.
- All high-pressure hydraulic hoses shall be of four-wire braid construction with a minimum SAE100R12 rating.

### ***OPERATOR PROTECTION & SAFETY***

- The mower cutter head shall have a six-second emergency shut down engaged by the operator inside the cab.
- The boom controls shall feature a master ON/OFF switch for complete power shutdown.
- Cab units shall include Shields® Premier 3/8" thick right side replacement polycarbonate windows.
- The replacement windows shall feature Supercoat™ anti-abrasion coating with integrated UV protection.

### ***TRACTOR SPECIFICATIONS***

- Tractor shall weigh a minimum of 8,000 lbs. and have a 95" minimum wheelbase.
- The engine shall produce a minimum of 95 net hp and 84 hp at the auxiliary power take-off.

### ***OPTIONAL EQUIPMENT***

- Lever controls in lieu of joystick.
- Rotary head with hydraulic door, 5" diameter cut capacity and swivel hitch post.
- Heavy duty flail with hydraulic door, 4" diameter cut capacity and swivel hitch post.
- Saw head with 4" diameter cutting capacity.
- Quick hitch for easy cutting head exchange.

### ***WARRANTY***

There shall be a one year parts and labor warranty. Non-governmental users are subject to modified policy. Only Terrain King (OEM) parts may be used for warranty replacement.

### ***PRODUCT LIABILITY INSURANCE***

*Choose the term that relates directly to your specific bidding situation. Please note that it is the dealer's responsibility to use the correct verbiage for the bid type. **DO NOT USE BOTH.***

#### ***Individual Agency Bids***

Bidders must include a copy of mowing equipment manufacturer's Certificate of Insurance for Product Liability of at least \$5,000,000 for the products subject to its bid. The insurance carrier is to be rated "A, VII" or higher by the A.M Best insurance rating service.

#### ***Multi-Unit DOT Bids***

The successful vendor will provide a copy of mowing equipment manufacturer's Certificate of Insurance of at least \$5,000,000 for Product Liability for the products subject to its bid naming the Agency as an additional insured party. The insurance carrier is to be rated "A, VII" or higher by the A.M. Best insurance rating service.



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**KB2300**

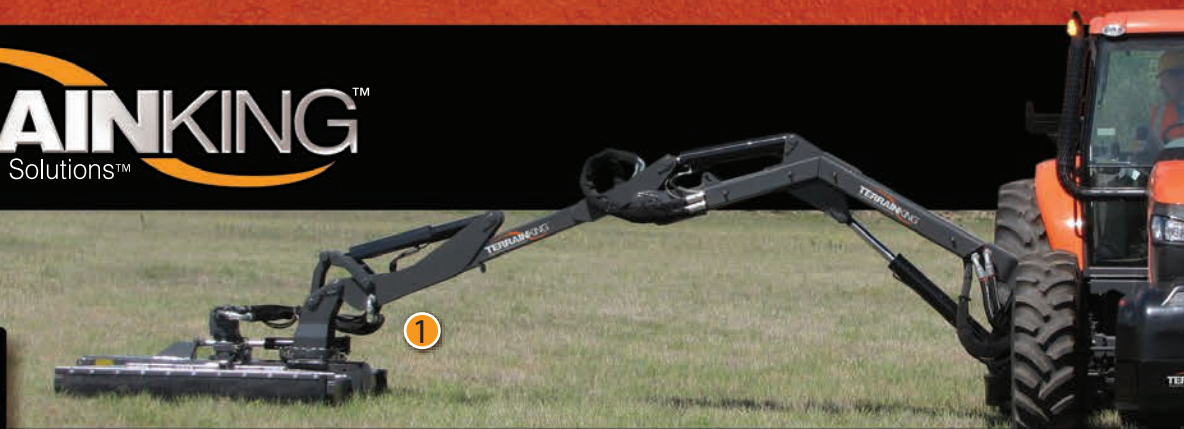
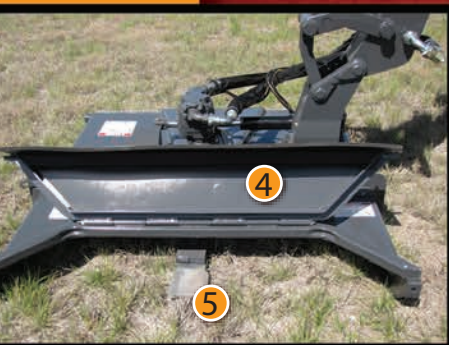
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— a reputation you can trust





# TERRAIN KING™

Engineering Practical Solutions™



- ① 23' horizontal reach  
20' vertical reach
- ② 9' 7" below grade reach  
5' rotary head shown  
Optional heads available

- ⑧ Greaseable  
Connex®  
bushings



- ⑨ Terrain King™  
exclusive full  
frame design

- ④ Hydraulically  
actuated door
- ⑤ 5" diameter  
cutting capacity

- ⑥ Head swivel  
option permits  
narrow transport
- ⑦ Independent  
hydraulic system

TERRAIN KING™

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## M6S SERIES

## M6S-111 Midsize Utility Tractors

\*\*\* EQUIPMENT IN STANDARD MACHINE & SPECIFICATIONS \*\*\*

### DIESEL ENGINE

Kubota V3800 Direct Injection  
3.8L (230 cu. in.) 4 Cyl  
EPA Tier 4 Final Compliant  
Common Rail Electronic Fuel Injection  
Electronic Engine Management  
Turbocharged  
w/Wastegate and Intercooled  
12V 900 CCA Battery  
Charging Output 80 amps Cab

### EXHAUST EMISSION CONTROL TYPE

DPF System (Diesel Particulate Filter)  
SCR System

### HYDRAULICS / HITCH / DRAWBAR

Open Center Gear Pump  
Max. Flow @ Rated Engine Speed  
Cab: 2600 RPM  
Power Steering: 12.9 gpm  
Impl. Flow - Cab: 17.6 gpm  
Total Flow - Cab: 30.5 gpm

### REMOTE VALVES

(1) SCD (Self Canceling Detent)  
(1) FD (Float Detent)

### 3 Point Hitch & Drawbar

Cat II 3-Point Hitch  
@ Lift Points: 4960 lbs  
(ASAE)@ 24" Behind: 3858 lbs  
Telescoping Lower Links  
Telescoping Stabilizers  
Swinging Drawbar

### POWER TAKE OFF

Live-Independent Hyd. PTO  
SAE 1 3/8" Six Spline  
540 RPM @ 2405 Eng. RPM  
SAE 1-38" Twenty-One Spline  
1000 RPM @ 2389 Eng. RPM  
Optional 540/1000 standard on  
2 speed PTO Model

### Transmission

16F/16R or 32F/32R Swing Shift Plus  
Shuttle Shift: Electric Hydraulic  
Main Shift: 8-Speed synchronized  
w/swing shift  
Range Shift: 2-Speed Constant Mesh  
Dual Speed: 2-Speed power shift  
Clutch - Multi-Plate Wet  
Planetary Final Drives  
Hydraulic Wet Dish Brakes

### FRONT AXLE

Hydrostatic Power Steering  
2WD: Steel Adjustable  
4WD: Cast Iron, Bevel Gear 55 Deg  
Mechanical Differential Lock  
Adjustable (Rim) Tread Spacing

### FLUID CAPACITY

Fuel Tank Capacity: 46.2 gal  
DEF Tank Capacity: 3.2 gal  
Cooling System: 2.5 gal  
Crankcase: 2.8 gal  
Hydraulics/Trans: 15.8 gal  
Front Axle case: 1.9 gal  
Bevel Gear case: 0.9 gal

### Cab Features

Tilt Steering Wheel  
Retractable Seat belt  
12V - Outlet  
Cup Holder  
Cloth Suspension Seat  
Side view mirrors  
Front wiper and washer

### LIGHTING

2 Headlights - Tail lights  
4 Hazard Flasher Lights w/ Turn Signals  
2 Grill Mounted Worklights  
2 Cab Mounted Worklights  
2 Rear Cab Mounted Worklights

### SAFETY EQUIPMENT

Flip-Up PTO Shield  
Safety Start Switches  
Electric Key Shut Off  
Parking Brake  
Turn Signals  
SMV Sign  
7-Pin Electrical Trailer Connector

### INSTRUMENTS

LCD Display:  
Shuttle position, DEF gauge,  
Clock, Travel Speed, PTO RPM,  
Hour Meter, Trip Meter,  
Fuel Consumption, PM Level, RPM Memory  
Oil Pressure  
Fuel Gauge  
Coolant Temperature  
Swing Shift H/L Digital Light Indicator  
4WD Indicator  
Water Separator Light

### TIRES AND WHEELS

Front: See following pages for combinations noted as standard  
Rear: See following pages for combinations noted as standard

### Model Specifications

#### M6S-111

SAE Gross HP: 114  
Engine Net HP: 105  
Max. PTO HP: 95





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**M**

## **KUBOTA DIESEL TRACTOR M6S-111**

A clean running engine with the power and speeds to tackle a wide range of jobs.

**The M6S-111 allows you to take on a variety of tasks. Ideal for hay and cattle operations, this economical machine is also great for uses such as loader work, forage operations, mowing and more. The M6S provides an ergonomical design, allowing you comfort during long hours.**

### **Technology Driven Engine Features**

The M6S has a V-3800-TierIV final engine which has a common rail fuel system, intercooler, exhaust gas recirculation. Employment of a diesel particulate filter and a selective catalytic reduction for minimized emissions. Additionally, it has Constant RPM management memory to minimize repetitive actions.

### **Ergonomic Operator Station**

To increase operator efficiency the design of the main shift lever provides a comfortable, easy-to-use feel and better visibility of the lever's shift stages, Hi-Lo, etc. Furthermore, the loader joystick operates with exceptional smoothness and responsiveness.

### **F32/R32 Transmission (Factory option)**

Swing Shift Plus models give you 32F/32R speeds, and allow you to operate the Swing Shift as well as the Dual speed with just one lever. Put this feature to best use when taking large load increases, working in mixed soil or during hay tool applications. An optional creep provides 16 additional slower speeds – a total of 48F/48R– for specialty applications.

### **F16/R16 Transmission**

Kubota "Swing Shift" provides you access to 16 speeds. The synchronized main shift "H" pattern puts four speeds immediately at your disposal. The Swing Shift adds to that by actuating the electricover – hydraulic high/ low synchronized range shift for a total of eight speeds– all controlled by a single lever. If a task requires more than eight speeds, simply move the auxiliary range lever left of the

seat for eight more to equal 16F/16R. An optional creep provides eight additional slower speeds. That's 24 speed –enough for the most demanding and precise work.

### **Clutch Off Switch On Main Shift Lever**

The clutch off switch is available on all CAB models. This feature allows you to shift a gear without using the clutch pedal. While pressing the clutch off switch, the clutch is disengaged. When the clutch off switch is released, the clutch is engaged.

### **High Performance Hydraulics**

The M6S CAB now has two standard rear remote valves. It offers one self-cancelling detent valve and one floating detent valve. With 17.2 GPM flow and an optional third remote valve, this tractor is ready to accept implements requiring multiple valves.

### **Other Features**

- Electro Hydraulic Shuttle
- Steering tilt angle up to 41 degrees

