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City of Loganville

Public Utilities
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Director

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Staff Report Department of Public Utilities

To: Honorable Skip Baliles and Members of the City Council

Through: Danny Roberts, City Manager

From: Brandon Phillips, Director of Utilities

Date: September 12, 2024

Subject: Purchase of Two Kubota Mini Excavators (ARPA Funds)

RECOMMENDATION:

Staff requests the City Council approves the purchase of two Kubota mini excavators.

FISCAL IMPLICATION:

The total quoted amount received under the state contract pricing is \$111,956.40, and ARPA funds will be used for the purchase. The excavators are in stock, and a delivery date will be scheduled upon payment.

BACKGROUND:

The Utility Department currently has two Kubota excavators, and are shared between four departments. One is a 2012 model, and the other excavator is a 2013 model. The Utility Department uses these excavators every day for water and sewer repairs, and the Stormwater Department uses one for general repairs and ditch work. The purchase of these new excavators will allow each department to have their own excavator, and will prevent any hindrances when projects are needing to be completed.



Hydraulic 6-in-1 Blade Models

Kubota's hydraulic 6-in-1 Blade can be angled right and left, and now, tilted as well. This blade enables six different positions: neutral, float-up, left-end-up, right-end-up, left-end-forward and right-end-forward. This feature makes leveling and backfilling work incredibly easy, even on inclines and uneven terrain, making you more productive and more efficient.

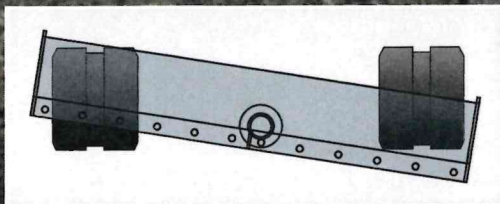
Tilt blade control

The 6-in-1 blade is a true productivity enhancer, and operation is now even more rewarding. Blade up, down, and float functions are the same as the previous model. Operate the rocker switch on top of the blade control to tilt the blade 10° up or down, and simply twist the control handle to angle the blade 25° left or right. Command all six functions simultaneously for more convenient control of landscaping, shaping, and backfilling jobs.



Superior width and tilt angle

This 5' 10.9"-wide blade stretches across the entire machine width, even when tilted. It can be tilted a generous 10 degrees right or left, allowing the operator to dig ditches easily when tilted on a flat surface.



Bolt-On cutting Edge (BOE)

The cutting edge protects the angle blade during heavy-duty dozing operations. The reversible cutting edge is divided into two sections to easily invert the edge for continued use.

Tie-down/lift points

The dozer blade's thick side plates improve the tie-down point's durability. Use them also as lifting points, along with the lifting point on top of the boom, for convenient 3-point crane lifting of the KX040-4.

SUPERIOR PERFORMANCE



Proportional flow control of auxiliary circuit (AUX1/2) and maximum oil flow setting

The KX040-4 is available with a standard AUX1 and optional AUX2 auxiliary circuits. The convenient thumb-operated switch on the lever allows easy proportional flow control of the auxiliary circuit, while a forefinger-operated on/off switch enables simple operation of special applications that require a constant oil flow. The maximum oil flow setting is conveniently adjustable from the digital panel. Up to five flow rates corresponding to specific attachments can be programmed in the memory on the digital panel for easy retrieval for the next job.



Strong bucket breakout

Even when heavily loaded, the KX040-4 won't slow down, thanks to its powerful breakout force. With the pin-on or quick coupler bucket, the bucket breakout force is more than enough for even the toughest excavating jobs.

Thumb bracket and relief valves

The hydraulic thumb makes short work of a variety of loading and material handling jobs. The factory installed mount brackets and hydraulics significantly reduce the time needed to mount accessories.

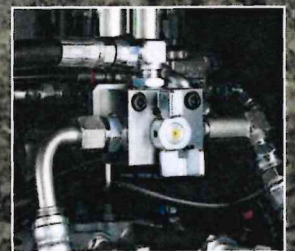
AUX1 diverter valve

With the AUX1 diverter valve, the AUX oil supply can be changed without having to remove the thumb pipeline when the operator wants to use a hydraulic attachment.



Third line hydraulic return

When working with one-way hydraulic attachments, such as a breaker or brush cutter, the standard third-line hydraulic return system allows oil to flow directly back to the tank without running through the control valves. This contributes to less oil contamination, reduced back pressure, and greater oil flow efficiency.



DELUXE INTERIOR

The KX040-4 raises the standard in 4-ton excavator comfort with a spacious cab that rivals 5-ton excavators. The luxurious cab features a wider entrance, greater legroom and a deluxe seat. Operability is greatly enhanced with more easy-to-use features than ever before.

New spacious cab

Designed for greater comfort, the new large cab with a fully flat floor provides more legroom to minimise fatigue.

Easy-open front side window

Unlike many excavator windows, the front glass window of the KX040-4 opens with ease. Just flip the latches on the window sides and slide it up. A gas-assist mechanism makes this action almost effortless.



Wider entrance

The KX040-4's larger cab provides a much wider door and more ample foot space, to make getting on and off the excavator a breeze.



E

C

B



A. Deluxe suspension seat

Designed and engineered to fit better and to keep you working longer comfortably, Kubota's high-back suspension seat reduces strain and minimizes operator fatigue. It reclines to accommodate your individual posture, and offers weight compensation, firm and adjustable wrist support and retractable seat belts.

B. 2-speed travel switch

By placing the 2-speed travel switch on the dozer lever, dozing operations can be done faster and easier.



C. Cup holder

With the convenience of a bigger cup holder, you can quench your thirst and work longer without leaving the cab. Or store your cell phone. The charging port is located conveniently close by.

D. Wrist rest

A thoughtfully designed wrist rest enhances operation and reduces operator fatigue.

E. Air conditioning

The overall air circulation in the cab has been improved, thanks to a stronger cooling/heating unit and the positioning of six vents around the operator to offer better all-round comfort.



Fully flat floor

For added comfort, the cabin floor is completely flat for greater legroom and a more spacious feel.



NEW DIGITAL PANEL



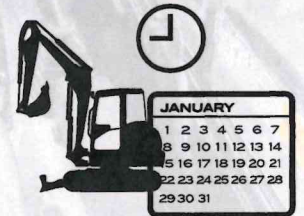
- A. Hour meter**
- B. Coolant temperature**
- C. Clock**
- D. Fuel level**
- E. Engine RPM**



Following the excellence of Kubota's Intelligent Control System, the new digital panel puts convenience at the operator's fingertips. Featuring easier button operation, the user-friendly digital panel is positioned to the front right corner of the operator. This operator-facing wider display greatly improves visibility. With easier access, simpler settings, easy-to-read indicators and alerts, you'll always be aware of the excavator's functioning status.

Operation history record

Operation history is automatically recorded on the KX040-4. You can trace back up to 90 days of the machine's usage dates by simply checking the built-in calendar.



Service mode



Warning mode



Operation history record



Max. oil flow setting (AUX1 and optional AUX2)

Automatic regeneration mode

The automatic regeneration system automatically burns particulate matter (soot) that accumulates in the diesel particulate filter (DPF) muffler. The soot is burned when the engine is operating at sufficient engine speed for regeneration. If the engine speed is lower than the required level for regeneration, the indicator requests an increase in the engine speed to keep the accumulation level low and the DPF clean. A service call or DPF filter replacement is required when the accumulated soot reaches a level that reduces the engine speed.



KX040-4 OPTIONS

STANDARD EQUIPMENT

Safety system

- Engine start safety system --
- Travel motor with disc brake
- Swivel motor with disc brake
- All hydraulic control

Working equipment

- Auxiliary hydraulic circuit 1
- 2 working lights on cab and 1 light on the boom
- Dozer blade with float function
- Thumb bracket and relief valve

Operator's space

- ROPS/OPG (TOP Guard, Level I) canopy
- Weight-adjustable full suspension seat
- Retractable seat belt
- Hydraulic pilot control levers with wrist rests
- Travel levers with foot pedals
- Two pattern selection system
- Digital panel
- 12V power source
- Cup holder
- Horn

Engine/Fuel system

- Double element air filter
- Auto idling system
- Water separator with drain cock

Undercarriage

- 1'1.8" (350 mm) rubber track
- 1 × upper track roller
- 4 double-flange track rollers on each side
- 2-speed travel switch on dozer lever
- 2-speed travel with auto-shift

Hydraulic system

- 1-pump load sensing system
- Pressure accumulator
- Hydraulic pressure checking ports
- Straight travel circuit
- Third line hydraulic return
- Auxiliary switch (AUX1) on right control lever
- Adjustable maximum oil flow on auxiliary hydraulic circuits 1

Others

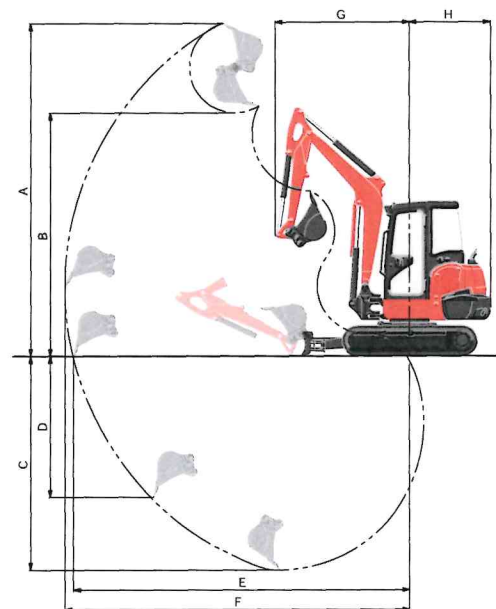
- Tool box
- Grease gun holder

OPTIONAL EQUIPMENT

- 6 in 1 blade with float function and BOE
- Angle blade with float function and BOE
- Cab with A/C
- Canopy lights
- Beacon lights
- 1'1.8" (350 mm) steel track
- Additional auxiliary hydraulic circuit 2 (adjustable max. oil flow control)
- Travel alarm
- Mirror kit
- Cab radio
- Hydraulic breaker
- Hydraulic thumb
- Pin-on and quick attach buckets

WORKING RANGE

Model			KX040-4
A	Max. digging height	ft. in. (mm)	17'6" (5335)
B	Max. dumping height	ft. in. (mm)	12'9.5" (3900)
C	Max. digging depth	ft. in. (mm)	11'2.7" (3420)
D	Max. vertical digging depth	ft. in. (mm)	7'4.8" (2255)
E	Max. digging radius, at ground level	ft. in. (mm)	17'9" (5410)
F	Max. digging radius	ft. in. (mm)	18'2.1" (5540)
G	Min. turning radius	W/o swing ft. in. (mm)	7'1.8" (2180)
		W swing ft. in. (mm)	5'11.1" (1805)
H	Min. tail turning radius	ft. in. (mm)	4'3.2" (1300)

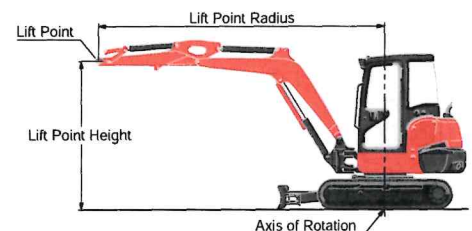


LIFTING CAPACITY

Cab rubber

LIFT POINT HEIGHT (ft)	LIFTING CAPACITY OVER-FRONT BLADE DOWN unit=1000 lbs			LIFTING CAPACITY OVER-SIDE unit=1000 lbs		
	LIFT POINT RADIUS (ft)			LIFT POINT RADIUS (ft)		
	8	12	14	8	12	14
6	2.72	1.91	1.75	2.72	1.60	1.27
4	3.54	2.13	1.86	2.76	1.55	1.25
2	4.08	2.32	1.96	2.65	1.51	1.22
GL	4.25	2.43	2.01	2.60	1.48	1.21

Machine with cab and rubber crawler, without bucket, with standard blade



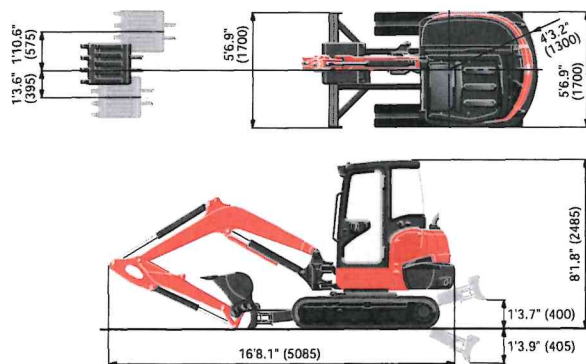
SPECIFICATIONS

Model		KX040-4		KX040-4 Angle Blade	KX040-4 6-in-1 Blade
Type of ROPS / OPG (TOP Guard, Level I)*		Canopy / Cab			
Type of tracks		Rubber / Steel			
Engine	Model	Kubota D1803-CR-TE4			
	Output (SAE J1995 gross)	HP (kW) / rpm	40.4 (30.1) / 2200		
	Output (SAE J1349 net)	HP (kW) / rpm	38.9 (29.0) / 2200		
	Displacement	cu. in. (cc)	111.4 (1826)		
Dimensions	Overall length	ft. in. (mm)	16'8.2" (5085)		
	Overall height	Canopy / Cab	ft. in. (mm) 8'1.8" (2485) / 8'1.8" (2485)		
	Overall width	ft. in. (mm)	5'6.9" (1700)	5'10.9" (1800)	
	Min. ground clearance	in. (mm)	12.99" (330)		
Hydraulic system	Pump capacity	GPM (ℓ/min)	24.4 (92.4)		
	Auxiliary hydraulic flow	AUX1 / AUX2 GPM (ℓ/min)	17.2 (65) / 9.8 (37)		
	Max. breakout force	Bucket / Arm lbf. (kgf)	9535 (4325) / 4112 (1865)		
Drive system	Travel speed	Low / High mph (km/h)	1.8 (2.9) / 3.1 (5.0)		
	Max. traction force	Low speed lbf. (kgf)	9747 (4420)		
	Tumbler distance	ft. in. (mm)	5'7.3" (1710)		
	Crawler length	ft. in. (mm)	7'1.6" (2175)		
	Shoe width	ft. in. (mm)	1'1.8" (350)		
	Ground contact pressure	Rubber Canopy / Cab psi (kPa)	4.53 (31.2) / 4.68 (32.3)	4.70 (32.4) / 4.86 (33.5)	4.87 (33.6) / 5.02 (34.6)
	Steel Canopy / Cab psi (kPa)	4.61 (31.8) / 4.76 (32.8)	4.78 (33.0) / 4.93 (34.0)	4.95 (34.1) / 5.10 (35.2)	
Swing system	Unit swing speed	rpm	9.2		
	Boom swing angle	Left / Right degree	70 / 55		
Blade	Dimensions	Width	ft. in. (mm)	5'6.9" (1700)	5'10.9" (1800)
		Height	ft. in. (mm)	1'1.8" (350)	1'3.2" (385)
	Max. lift above ground	ft. in. (mm)	1'3.7" (400)	1'4.5" (420)	1'4.9" (430)
	Max. drop below ground	ft. in. (mm)	1'3.9" (405)	1'8.1" (510)	1'8.9" (530)
	Angle	Left / Right degree	-	25 / 25	
	Tilt degree	-	-	10 / 10	
Hydraulic oil (Reservoir / System)		gal (ℓ)	11.1 (42) / 19.6 (74)		
Fuel reservoir		gal (ℓ)	16.9 (64)		
Operating weight (Including operator's weight @ 175 lbs.)	Rubber Canopy / Cab	lbs. (kg)	9195 (4170) / 9500 (4310)	9545 (4330) / 9855 (4470)	9900 (4490) / 10210 (4630)
	Steel Canopy / Cab	lbs. (kg)	9350 (4240) / 9655 (4380)	9700 (4400) / 10010 (4540)	10050 (4560) / 10360 (4700)

* OPG (TOP Guard, Level I) in accordance with ISO10262 is equivalent in definition to FOPS (Falling Object Protective Structure).

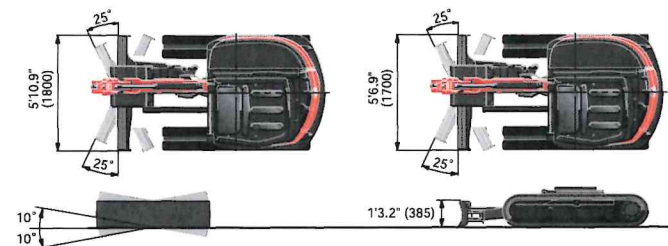
The company reserves the right to change the above specifications without notice. This brochure is for descriptive purposes only. Please contact your local Kubota dealer for warranty information. For your safety, Kubota strongly recommends the use of a Rollover Protective Structure (ROPS) and seat belt for almost all applications.

DIMENSIONS



6-in-1 Blade

Angle Blade



Unit: ft. in. (mm)

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