



THE CORPORATION OF THE CITY OF NIAGARA FALLS

**REQUEST FOR TENDER - SUPPLY**

**RFT29-2019 - SUPPLY & DELIVERY OF  
ONE (1) FOUR WHEEL DRIVE EXTENDIBLE BACKHOE MACHINE**

***SPECIFICATIONS***

**NAME OF COMPANY (DEALER):** \_\_\_\_\_

ITEM/CATEGORY	CITY REQUIREMENTS	BIDDER TO STATE SPECIFICATIONS
<b>Make</b>		
<b>Year</b>	New	
<b>Model</b>	420 or equivalent	
<b>Engine</b>	<p>Engine must comply with U.S. EPA Tier 4 Final / EU Stage IV off road emission requirements.</p> <p>Engine shall have an economy mode to help maximize fuel efficiency, while maintaining backhoe performance</p> <p>Turbocharged engine net flywheel horsepower shall be at least 94 HP (70 kW) @ 2200 RPM according to ISO9249.</p> <p>Engine compartment side panels shall have standard noise reduction and heat control insulation.</p> <p>The engine shall have a high strength cylinder head that is a cast iron alloy construction with extra duty wall and deck thickness, including intake and exhaust ports that are precision cast to promote optimum gas flow.</p> <p>Engine cooling fan shall have a heavy-duty guard that fully prevents human contact while in operation.</p> <p>Engine shall be equipped with an alternator that has a charging capacity of minimum 150 amperes.</p> <p>Backhoe joystick shall be equipped with a quick idle down feature that lowers the engine speed to 1,000 rpm</p>	

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ITEM/CATEGORY	CITY REQUIREMENTS	BIDDER TO STATE SPECIFICATIONS
	Engine must be equipped with Block Heater	
<b>Transmission Powertrain</b>	Power Shuttle Transmission 4WD shall be engaged at any-time by activating Switch on front console. An operator shall be able to activate the switch while the machine is moving or stopped, also with or without a load Transmission shall have an electric, neutral lock switch on the front console to prevent driveline engagement Forward/reverse shuttle shall be a contactless unit for reliability. Units shall be equipped with a transmission disconnect button on the gear shifter and loader control to allow full engine power to the loader. Differential lock shall be located on the loader joystick control.	
<b>Steering</b>	Power	
<b>Oil Filter</b>	Supply spare	
<b>Air Filter</b>	Supply spare	
<b>Tires</b>	12.5/80-18 12PR (front) and 19.5 – 24 12PR (rear) with radial tires. STATE:	
<b>Brakes</b>	Parking/secondary brakes shall be independent of the service brake system, allow operator complete control for a modulated stop, and shall be mechanically applied and adjusted from the cab without the need for tools. Brakes shall be inboard oil-immersed, hydraulically actuated, multiple discs on final drive input drive shaft. Brake mode selector switch shall have a 3 position switch allowing 2WD, 2WD travel	

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	with 4WD braking and full time four wheel drive. Service brakes shall be fully self-adjusting.	
<b>Electrical System</b>	12 volt negative ground, utilizing wiring and connectors meeting IP69 water ingress test standard. Central fuse panel. 110A/hr battery. 150 amp alternator standard. 2 fixed and 2 adjustable rear working lights. 12 volt outlet for accessories, mobile phone holders. Light and alarm for battery charge condition, coolant temperature, engine oil pressure, transmission oil pressure, transmission oil temperature, air cleaner restriction, parking brake engagement and water in the fuel. Engine oil level sensor. Light indicators for front work lights on, rear work lights on, turn signal and 4 way flashers.	
<b>Windshield Wipers</b>	Front and Rear	
<b>Windows &amp; Mirrors</b>	TINTED GLASS AND OUTSIDE MIRRORS	
<b>Heater &amp; Air Conditioning</b>	Factory installed	
<b>Seat/Operator Platform</b>	OSHA approved ROPS/FOPS shall be integral with cab Standard air suspension seat. Pilot Controls for the backhoe shall be adjustable fore/aft, side to side and actuated by a foot control Machine shall come standard with horn, audible back up alarm and electric fuel system shut off. LCD Home Screen shall display the gear, total machine hours, rpm, battery voltage, and torque converter oil temperature. LCD screen should also show totals menu, service menu, and settings menu.	

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	<p>Cab machines shall include four front and four rear working lights. Machine shall have stop and turn signals with flashing hazard lamps visible from front and rear. Electric auxiliary socket shall be available on roof for connection to items such as a rotating beacon, one on each side of the roof Optional heated seat Tilt and telescoping steering wheel shall be standard for operator comfort. Cab shall have an optional air conditioner that provides the operator with a choice of fresh outside air drawn through filters or recirculating cab air with HVAC recirculation selector Cab shall include factory-installed heater/defroster with multiple speed blower with the control in reach from the front and rear of the machine.</p>	
<b>Loader</b>	<p>"1.25 CYD (0.96 m3) General Purpose bucket. Machine shall meet the following specifications Minimum breakout force of 10,405 lbs (46.3 kN) Minimum dump clearance of 8'9" (2679 mm) at full lift and 44 degree discharge Minimum hinge pin height 11'5" (3490 mm) Minimum lift capacity 8,193 lbs (3716 kg) Multi-Purpose bucket shall be operated by a thumb control on the loader joystick Loader bucket shall be suitable for general purpose with heavy-duty characteristics including high strength wear material in the leading edges of the lower side corners, equaling the material properties of the base cutting edge. Loader bucket shall have at least a 2-piece bolt-on cutting edge for serviceability.</p>	

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<b>Hydraulics</b>	<p>Machine will be plumbed to add hammer / Packer attachment and controlled from in Cab.</p> <p>Hydraulic system shall include high-pressure hoses consisting of 4 layers of overlapping insulated spiral wire matrix.</p> <p>A single, optional auxiliary hydraulic circuit shall be capable of operating hammers, compactors, cold planers, augers, thumbs, side tilt couplers and other work tools</p> <p>Optional combination auxiliary lines allowing hydraulic tool to be attached.</p> <p>. Hydraulic pump shall be rated at 43 gpm (163 lpm)</p> <p>Machine shall have an electronically controlled variable displacement load sensing, axial piston pump for low idle lifting and maximum durability.</p> <p>Backhoe hydraulic lines shall be fastened and constrained from hanging low within the chassis, preventing hoses from damage.</p> <p>All implement hydraulic lines will incorporate hoses with a high wear resistant coating.</p>	
<b>Backhoe</b>	<p>Hammer circuit with internally routed hoses with selectable hi/low flow from operator station.</p> <p>Equipped with 24" Bucket.</p> <p>Combined hammer/bi-directional circuit.</p> <p>Per SAE standards, rated bucket digging force shall be a minimum of 14431 lb (64.19 kN) with a standard stick and 14,228 lb (63.29 kN) with an extendible stick.</p> <p>Backhoe reach, from the swing pivot, shall</p>	

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	<p>be no less than stick and 21'10" (6652 mm) with a fully extended, extendible stick.            Backhoe shall have a loading height of no less than 13'8" (4169 mm) with a extended extendible stick            Extendible stick shall be self-lubricating, adjusted with shims, and require no grease.            Backhoe shall be equipped with a boom lock that can be controlled from the seat.            Backhoe controls shall be available as pilot operated joystick controls with a standard pattern changer for SAE excavator or ISO backhoe control patterns.            Machine shall be equipped with an integrated lifting eye</p>	
<b>Additional Options</b>	<p>Engine block heater.            Headlights.            12V 1000 CCA battery.            220 lb counterweight.            Exterior rear view mirrors.            Instrument vandal guard.            Seat headrest.            3" seat belt.            Flip over stabilizer feet.            Stabilizer cylinder protection.            Front fenders.            Backhoe buckets.24"            Backhoe hydraulic quick coupler.            Cab air conditioning.            Air suspension seat.            Roof mounted LED beacon or strobe.            SMV emblem.            Equipped with Auto-Greaser</p>	
<b>Serviceability and Maintenance</b>	KM.	

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<b>Lights</b>	Emergency lighting and work lights	
<b>Mfg.'s Corrosion Warranty</b>		
<b>Diagnostic Software</b>	Lap Top Software for Diagnostics of Machine	
<b>Warranty</b>	Standard warranty, 12 months, no hour limitation, with an additional 12 months or 2,000 hour.	
<b>Manuals</b>	Complete Parts Manuals	
<b>Manuals</b>	Complete Service Manuals	
<b>Delivery</b>	To 3200 Stanley Ave, Niagara Falls	
<b>Delivery Date</b>	City will review Delivery time.	