

ENGINE		
Engine must comply with U.S. EPA Tier 3 / EU Stage III off road emission requirements.	Y___ N___	
Engine shall have an economy mode to help maximize fuel efficiency, while maintaining backhoe performance	Y___ N___	
Turbocharged engine net flywheel horsepower shall be at least 93 HP (69 kW) @ 2200 RPM according to SAE J1349.	Y___ N___	
Net peak torque at 1400 rpm shall be not less than 294 ft-lb (398 N-m) with 46% torque rise.	Y___ N___	
Engine shall have a secondary fuel filter	Y___ N___	
Engine shall have a vertical spin-on fuel filters.	Y___ N___	
Engine shall be equipped with electric fuel priming pump	Y___ N___	
Engine shall have a water/sediment bowl with water separator service indicator light.	Y___ N___	
Engine air filter shall have a pre-cleaner and a dust ejector.	Y___ N___	
The engine will have a standard glow plug starting aid for efficient cold weather starting to -28 degrees celcius without using ether.	Y___ N___	
Coolant circulation shall be provided by a gear-driven water pump, not solely belt driven, to prevent accessory belt slip and continue coolant circulation in the event of a belt failure.	Y___ N___	
Engine shall be equipped with a block heater		
Radiator shall be equipped with anti-freeze rated to -55 celcius		
Engine shall be equipped with an alternator that has a charging capacity of minimum 150 amperes.	Y___ N___	
Engine shall be equipped with two maintenance-free 880 CCA batteries	Y___ N___	
Engine shall be equipped with a 12-volt direct-electric starting and charging system.	Y___ N___	
Machine shall be equipped with a standard battery master disconnect switch	Y___ N___	
Engine shall have a full flow spin-on type oil filter that is vertically mounted below the crankshaft centerline.	Y___ N___	
Backhoe joystick shall be equipped with a quick idle down feature that lowers the engine speed to 1,000 rpm	Y___ N___	
Machine shall have Automatic Engine Speed Control that reduces engine speed when the backhoe is not in use. This will conserve fuel and lower emission noise	Y___ N___	
POWERTRAIN/TRANSMISSION		
Transmission shall have an electric, neutral lock switch on the front console to prevent driveline engagement	Y___ N___	
Transmission, differentials, and hydraulics shall have separate fluid reservoirs.	Y___ N___	
4WD shall be engaged at anytime 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	Y___ N___	
4WD guard shall provide full coverage between the frame rails to protect the front drive shaft.	Y___ N___	
Units shall be equipped with a transmission disconnect button on the gear shifter and loader control to allow full engine power to the loader.	Y___ N___	
Transmission shall have spin-on type oil filter vertically mounted.	Y___ N___	
Differential lock shall be located on the loader joystick control	Y___ N___	

Unit shall have a high gear speed of no less than 25 mph (40.0 kph).	Y ___ N ___
Automatically shifting transmission with 6 forward and 3 reverse gears with "kick-down" capability.	Y ___ N ___
BRAKES	
Brake mode selector switch shall have a 3 position switch allowing 2WD, 2WD travel with 4WD braking and full time four wheel drive.	Y ___ N ___
Two wheel drive with four wheel braking must be available at all speeds and when the machine is in any gear.	Y ___ N ___
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.	Y ___ N ___
Service brakes shall be hydraulically boosted for low pedal efforts.	Y ___ N ___
Service brakes shall be completely enclosed and sealed	Y ___ N ___
Brakes shall be outboard oil-immersed, hydraulically actuated, multiple discs on final drive input drive shaft.	Y ___ N ___
Service brakes shall be fully self-adjusting.	Y ___ N ___
HYDRAULIC SYSTEM	
Machine shall be able to reach maximum lift capacity at any engine speed.	Y ___ N ___
Hydraulic system shall have a replaceable 6-micron vertically mounted, bowl and cartridge filter that is accessible from under the main frame.	Y ___ N ___
Hydraulic pump shall be rated at 43 gpm (163 lpm)	Y ___ N ___
Machine shall have an electronically controlled variable displacement load sensing, axial piston pump for low idle lifting and maximum durability.	Y ___ N ___
Combination auxiliary lines shall be available for both one way or two way flow capable of operating hammers, compactors, thumbs, and other work tools	Y ___ N ___
Machine must have adjustable auxiliary flow control for better controllability of attachments	Y ___ N ___
AXLES	
Front axle shall be pendulum mounted, permanently sealed and lubricated	Y ___ N ___
Rear axle shall have differential lock with "on-the-go" engagement.	Y ___ N ___
The final drives shall be heavy-duty outboard planetary type	Y ___ N ___
Heavy-duty rear axle shall be semi-floating with self-adjusting inboard brakes.	Y ___ N ___
WHEELS/TIRES	
4WD Tires shall be no less than 12.5/80-18 12PR (front) and 19.5 – 24 12PR (rear) with radial tires.	Y ___ N ___
All valve stems to be protected by metal valve stem covers	Y ___ N ___
Unit shall be equipped with ride control	Y ___ N ___
Unit shall be equipped with front fenders	Y ___ N ___
OPERATORS STATION	

Unit shall be equipped with an enclosed cab		
Operator shall have complete control to disable, or lock, the backhoe Pilot Controls with a single switch on the console.	Y___ N___	
Pilot Controls for the backhoe shall be adjustable fore/aft, side to side and actuated by a foot control	Y___ N___	
Machine shall come standard with horn, audible back up alarm and electric fuel system shut off.	Y___ N___	
The governor pedal shall be hinged and mounted to the floor for maximum pedal positioning control.	Y___ N___	
Side instruments shall include a premium gauge cluster consisting of LCD Information screen and LCD warnings. LDC warns shall include; Engine Oil Pressure, Machine Locked, Service Due, Air Filter Blocked, High Coolant Temperature, Auto Idle Shutdown, High Torque Converter Temperature and Hydraulic Filter Bypass	Y___ N___	
Unit shall have a lighted instrument panel located on the right side of the cab so that it is visible from both loader and backhoe operating positions. Indicator lights to include, Water in Fuel, Remote dial throttle active, engine warning, warning lamp, emissions module malfunction, AESC active, Regen Inhibited, Low battery/charging system warning, high hydraulic oil temperature, Wait to start and Eco Mode Active	Y___ N___	
Unit shall include four front and four rear working lights.	Y___ N___	
Machine shall have stop and turn signals with flashing hazard lamps visible from front and rear.	Y___ N___	
Electric auxiliary socket shall be available on roof for connection to items such as a rotating beacon.	Y___ N___	
Roof cab shall have three magnetic beacon locations.	Y___ N___	
A switch, accessible to the operator from the seat, shall control the auxiliary socket, primarily used for beacon operation.	Y___ N___	
Operator's compartment shall come equipped with a standard air suspension seat that can be adjusted in the fore/aft position and has a lever that controls the release for rotation at 180 degree swivel	Y___ N___	
Unit shall come equipped with heated seat	Y___ N___	
With doors and windows closed, machine operating at maximum governed speed unit shall have a maximum operator sound exposure Leq of 79 dB(A) according to SAE J1166.	Y___ N___	
Stabilizer controls shall be conveniently located to the operator's left side/hand.	Y___ N___	
Tilt and teleschoping steering wheel	Y___ N___	
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	Y___ N___	
Cab shall have an optional heat settings	Y___ N___	
Cab shall be equipped with two doors and 6 opening windows and floor mat.	Y___ N___	
Operator's compartment shall feature laminated safety glass on front, windshield and tempered glass on all other windows.	Y___ N___	
Cab shall include factory-installed heater/defroster with multiple speed blower with the control in reach from the front and rear of the machine.	Y___ N___	
Heater will have a minimum rated capacity of 28,742 BTU and be equipped with a 365 cfm fan.	Y___ N___	
All removable glass panels shall be flat glass for easy and low cost service	Y___ N___	

All rear window sections shall stow overhead, inside the cab for maximum visibility, ventilation and operator comfort.	Y___ N___
All rear window sections shall open upwards and store overhead with outside portion facing upwards to keep water droplets and dirt from falling on operator.	Y___ N___
Front and rear windshield wipers/washers shall be standard.	Y___ N___
Pantography front windshield wiper and intermittent rear windowshield wiper	Y___ N___
Enclosed cab shall have a front window visor that extends entire width of window	Y___ N___
	Y___ N___
BACKHOE	
Extendible stick shall be thumb-ready with thumb cylinder mount standard from factory.	Y___ N___
Extendible stick shall be field adjusted in less than 30 minutes to eliminate excessive clearance, using simple hand tools	Y___ N___
Backhoe shall be center-pivot type complete with hydraulic stabilizers.	
Backhoe shall come standard with a curved boom for its ability to work in confined areas and to reach over obstacles	Y___ N___
Backhoe reach, from the swing pivot, shall be no less than 21'10" (6652 mm) with a fully extended, extendible stick.	Y___ N___
Backhoe shall have a loading height of no less than 13'8" (4169 mm) with a extended extendible stick	Y___ N___
Stick shall have serrated edges, at least 28" (760 mm) long, to help clamp objects securely with bucket.	Y___ N___
Extendible stick shall be self-lubricating, adjusted with shims, and require no grease.	Y___ N___
Backhoe shall be equipped with a swing transport lock.	Y___ N___
Backhoe shall be equipped with a boom lock that can be controlled from the seat.	Y___ N___
Pattern changer shall be available for switching Backhoe and Excavator control patterns with an electric switch, located within the operator's station	Y___ N___
Backhoe shall be controlled with adjustable excavator style pilot operated joystick controls.	Y___ N___
Auxiliary controls shall be controlled by a electro-hydraulic thumb roller	Y___ N___
Auto-up stabilizer controls	Y___ N___
Stabilizers shall be pilot operated for low efforts and located on the side console for easy access whether facing front or rear.	Y___ N___
Flip over stabilizer pads shall have a dirt grouser.	Y___ N___
Stabilizers shall be able to lift the machine high enough to clear tires, on concrete with street pads.	Y___ N___
	Y___ N___
LOADER (SELECT BUCKET)	Y___ N___

1.31 CYD (1.00 m3) Multi Purpose bucket (4 in 1). Machine shall meet the following specifications Minimum breakout force of 11,020 lbs (49 kN) Minimum dump clearance of 9'2" (2798 mm) at full lift and 44 degree discharge Minimum dig depth of 4" (110 mm) Minimum hinge pin height 11'5" (3474 mm) Minimum lift capacity 6,828 lbs (3097 kg) Minimum rackback angle at Ground Level of 38 degrees	Y ____ N ____	
Loader shall be equipped with a return-to-dig mechanism.	Y ____ N ____	
Loader shall be equipped with a lift cylinder brace to mechanically hold the loader arms in the raised position.	Y ____ N ____	
Multi-Purpose bucket shall be operated by a thumb control on the loader joystick	Y ____ N ____	
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.	Y ____ N ____	
Loader bucket shall have a 2-piece or 3-piece bolt-on cutting edge for serviceability.	Y ____ N ____	
Loader bucket shall be self-leveling for truck loading spoil and equipped with a bucket tilt indicator.	Y ____ N ____	
WORK TOOL OPTIONS		
Unit shall be equipped with intergrated tool carrier front (IT), hydraulic quick coupler	Y ____ N ____	
Rear manual pin grabber coupler	Y ____ N ____	
AMI Hydraulic thumb	Y ____ N ____	
30" HD Rear digging bucket with adapters and teeth	Y ____ N ____	
AMI 2.5 CYD snow bucket with bolt on cutting edge	Y ____ N ____	
PRICE AUTOLUBE AS SEPARATE ITEM		
SERVICEABILITY		
Hood release to be lockable and easily accessible from inside the cab.	Y ____ N ____	
Engine oil, transmission oil, hydraulic oil, brake fluid, washer fluid, coolant, engine air filter, and engine air filter monitor shall all be consolidated service points, accessible under the hood with loader arms down.	Y ____ N ____	
Entire machine cooling package, including radiator, transmission oil cooler, hydraulic oil cooler, fuel cooler and ATAAC shall be easily accessible without use of tools.	Y ____ N ____	
Water and sediment shall be drained from the fuel / water filter from a standing position without tools.	Y ____ N ____	
The batteries shall be accessible without the use of hand tools to remove panels, toolboxes, etc.	Y ____ N ____	
The swing frame shall have replaceable bushings installed in the pin joints for the boom, swing cylinder rod ends and swing post.	Y ____ N ____	
Machine shall have easily accessible jumper posts to aid in jump-starting machine or other machines.	Y ____ N ____	

The rear axle shall have brake wear check ports, allowing access to inspect brake pad wear.	Y___ N___
The machine will be equipped with an electronic diagnostic port within the operator station, allowing service codes to be downloaded and electronic parameters to be adjusted.	Y___ N___
Fuel tank shall contain a debris screen	Y___ N___
Machine fault codes shall be accessible from LCD screen	
MINIMUM SERVICE FILL CAPACITIES	
Standard engine oil with filter capacity shall not be less than 2.3 gallons (8.8 L).	Y___ N___
Standard fuel tank capacity shall not be less than 42 gallons (160 L)	Y___ N___
Standard hydraulic system capacity shall not be less than 25.1 gallons (95 L).	Y___ N___
OWNING AND OPERATING COSTS	
Front axles shall have sealed king pin and center pendulum bearings.	Y___ N___
Driveshaft universal joints shall be maintenance free.	Y___ N___
Standard fill hydraulic oil must be Advanced HYDO 10 with up to 6000hr service interval in typical applications.	Y___ N___
Front and Rear Axle Oil change shall have a 1000- hour change interval for lowering operating maintenance cost	Y___ N___
Cooling System shall have a 12,000-hour change interval for lowering operating maintenance cost	Y___ N___
500-hour engine oil change interval for lowering operating maintenance cost.	Y___ N___
ADDITIONAL FEATURES	Y___ N___
Machine shall be equipped with an optional, on-board machine communication system, recording and transmitting GPS, service hour reading, fuel tank reading and ignition status.	Y___ N___
Machine shall be equipped with an optional OEM anti-theft system, utilizing programmable key identification.	Y___ N___

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