

**GRADER
SPECIFICATIONS RFP YXT 2019-003**

DESCRIPTION	CONFORM		IF NO, INDICATE ALTERNATIVE OR COMMENTS
	YES	NO	
ACCEPTABLE MAKE and MODELS			
Specify the make and model of the unit being tendered.			Make: Model:
GENERAL SPECIFICATIONS			
The minimum operating weight of the standard unit, without options shall be 34,000 lbs.			
The grader must be of heavy-duty construction throughout.			
The minimum down pressure on the moldboard must be 17,000 lbs.			
The grader quoted must include all features standard for the model and year that are not stated in this specification.			
The grader offered must have a local dealer that offers full service and parts.			
ENGINE			
Engine shall meet or exceed current Tier III exhaust emission level standards			
Engine shall be of a rebuildable design			
Engine shall have a minimum net horsepower of 200 HP.			
Engine shall be fully equipped six cylinder, four stroke diesel.			
Engine shall be turbocharged and air to air after-cooled.			
To be equipped with a 24 volt electric system for starting and operating with a minimum 200 amp alternator. A 12 Volt adapter shall be installed to allow for the installation of radios and beacon lights.			
An electric master disconnect switch to be standard.			
The air cleaner shall be a dual element dry type with a service indicator.			
Engine air filters shall be removable without the use of tools.			

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ENGINE cont'd			
To be supplied with extended life coolant/antifreeze with a minimum protection to - 40°F. Coolant must meet or exceed Engine Manufacturers Specifications.			
Provide a cold starting system.			
To be equipped with an engine coolant heater powered by 110 volt external electric power source			
Engine compartment must be equipped with a switched compartment service light.			
To be equipped with a minimum of three (3) 1100 CCA heavy duty maintenance free batteries.			
Crankcase guard to be supplied on the loader			
Oil filter to be a full flow type, incorporating a replaceable element.			
Provide a high coolant temperature and low oil pressure indicators in both audible and visible warnings.			
Provide a full flow fuel/water separator incorporating a replaceable element.			
TRANSMISSION / POWERTRAIN/AXLES			
Shall be a power shift type.			
Transmission shall provide for a minimum of six forward speeds and four reverse speeds.			
The unit must have a minimum 30 km per hour travelling speed.			
A driver controlled locking differential must be supplied on the rear axle.			
The drive axles are to be positive 4-wheel type employing heavy duty strength roller chain of 2-inch minimum pitch.			

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TRANSMISSION / POWERTRAIN cont'd			
The unit must have a minimum 15-degree oscillating type front axle.			
Transmission shall provide a transmission neutral mode.			
The final drives shall be of a planetary design			
Transmission guard to be supplied on the Machine			
BRAKES			
The unit must have brakes on all four rear wheels.			
The brakes can be either dry or wet type. In either case they must be power assisted.			
Brakes shall be protected from water, mud and dust			
An air dryer complete with moisture ejector must be installed on units with air assisted brakes.			
Brakes shall meet current B.C. provincial and Federal Canada regulations for primary, secondary brakes and parking brake requirements.			
The unit is to be complete with an independent parking brake system which is applied to the grader driveline.			

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HYDRAULIC SYSTEM			
The hydraulic system shall be fully filtered and completely sealed			
The pump(s) are to be of sufficient size and design that optimize available machine HP			
The hydraulic system must be complete with a mold board float, allowing the moldboard to follow the road contour.			
All hydraulic cylinders to be double acting.			
Hydraulic oil pumps (s) to be driven by the engine through positive mechanical drive.			
The hydraulic system to include adequate oil capacity, filtration (with replaceable filters), pressure control and relief devices, and other equipment necessary to ensure the satisfactory and safe operation of the grader and attachments.			
Full power steering with emergency steer capability in the event of power loss.			
Hydraulics for attachments to be readily coupled to the system with quick-disconnect fittings. System to provide flow dividers, flow control valves and other devices as necessary to ensure satisfactory operation of specified attachments.			
Hydraulic pressure taps shall be provided for checking pressure in the hydraulic implement and steering systems.			
System must be compatible with common type hydraulic fluids.			
Provide the hydraulic valves for the additional of a plow wing and a scarifier.			

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CAB / OPERATING WORKSTATION			
Integral ROPS and Sound Suppressed Cab that meets both current OSHA and WCB standards for operator sound.			
Cab shall include a heater and defroster			
Cab shall be air conditioned			
Safety glass windows			
Provide tinted glass on all windows			
Sunshade front and rear			
Machine shall be equipped with a multi-level warning system which shall signal machine and component malfunctions			
The cab is to be equipped with adequate steps, handholds and non-slip surfaces to permit easy access and exit without hazard to the operator.			
Full instrumentation including hour meter			
Steering wheel, and operator controls shall be adjustable as a single unit (tilt steering)			
Cloth covered air-ride seat that is adjustable fore and aft, has lumbar support and adjustable armrests			

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CAB / OPERATING WORKSTATION			
Shall have approved operator seat belts			
Shall be equipped with a heated, air suspension fully adjustable seat, with arm rests.			
Shall be equipped with front window sun visor.			
Shall be equipped with heated exterior mirrors.			
The cab shall have electric windshield wipers and washers at front and rear.			
Cab shall have internally and externally mounted rear view mirrors			
Cab shall have an interior dome light with entry door activation.			
Audible warning system that sounds when the transmission is engaged and the parking brake is applied			
Cab shall have, at a minimum four front and two rear LED working lights, and two rear stop and tail lights and two lower cab LED lights illuminating the moldboard and LED side lights illuminating the right hand rear mounted snow wing.			
Machine shall be equipped with directional signal lights			
Provide roof mounted LED amber flashing light			
Machine to be equipped with a back-up Alarm			
Grader to have rubber floor mats			
Grader to be equipped with a horn			
Grader to be equipped with a high-resolution rear-view camera.			
Three auxiliary switched power 12 volt power supply's, must be included in the cab in a convenient location. Switches must have a lighted indicator and be labelled as Spare.			

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BLADE and CUTTING EDGES			
The grader is to be supplied with a minimum 12-foot-long x 22-inch-high moldboard, complete with a replaceable cutting edge.			
The blade is to be equipped with power tilt			
The blade is to be equipped with power hydraulically side shift capability, with a minimum extendable reach of 4 feet outside of the tires.			
Cylinders shall have chrome plated rods			
Provide a minimum of 14 inches of clearance with the blade in the raised position.			
TANK CAPACITIES			
Minimum Fuel Tank capacity of 200 litres. State Actual:			
Hydraulic Tank capacity must be of sufficient size to supply hydraulic pumps and all circuits State Actual:			
FRAME			
The frame is to be strength, reinforced box section construction.			
The frame is to be complete with all welded brackets and attachments necessary for the later installation of a right-side mounted snow wing, and front mounted plow.			
TIRES			
Grader shall be equipped with 25 ply rated Snow Grip Radial type tire as a minimum			
Acceptable brands of tires are Michelin or Goodyear			
State tires on quoted unit:			

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MISCELLANEOUS			
Supply one complete printed copy of the following: <ul style="list-style-type: none"> • Parts manual, • Service and repair manual and, • Two (2) copies of the operation manuals, And supply an electronic version of the following: <ul style="list-style-type: none"> • Parts manual, complete, • Service and repair manual and, • Operation manual 			
If available, provide operator training video.			
Factory warranty must be a minimum of five years. State actual warranty and items it covers			
If dealer requested warranty repairs have not commenced within a 48-hour period. The vendee reserves the right to complete repairs and bill the loader supplier/manufacturer for the repair parts and labour in accordance with the dealer's standard repair time and rate.			
Provide the name and phone number of the person to be contacted should warranty repairs be required. If the warranty dealer is not the PDI dealer, provide the reason and dealer details.			DEALER: CONTACT:
Hydraulic and electrical schematics shall be Supplied			
Optional – Supply trade in value of Model 670 1976 John Deere grader			
Machine to be painted factory yellow			
Training of operators and mechanics to be provided by the successful bidder upon delivery. One full day for each group is required.			
Freight must be invoiced separately . Delivery is F.O.B. Northwest Regional Airport Terrace-Kitimat, 103 4401 Bristol Rd. Terrace, B.C. V8G 0E9			

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DESCRIPTION	CONFORM		IF NO, INDICATE ALTERNATIVE OR COMMENTS
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Grader must be fully compliant to all Province of B.C. and Federal Government of Canada regulations, that pertain to vehicle/equipment operations both on and off highway.			
Grader can be delivered to, and accepted by Northwest Regional Airport Terrace-Kitimat, on or before March 15, 2019			
Grader can be invoiced on or before March 15, 2019			
ADDITIONAL EQUIPMENT			
Grader must be equipped to accept a front plow. This includes all the hydraulic controls, piping, light bar and hosing to operate the plow, as well as all frame mounting to accept the plow.			
Supply a Front plow, with a minimum size of 10 ft. x 3 ft. (to be priced separately as an option).			
Wobbly for rear compacting. (to be priced separately as an option, include installation).			
Provide a rear right hand side mounted, minimum 12-foot x 4-foot snow wing. The plow wing is to be hydraulically operated.			
Provide a premium grading LED light package. List the number of lights and their location.			

Name of person confirming equipment meets this spec

Date

Signature supplier confirming equipment meets this spec

Additional Comments