

Town of Summerville

Rubber Loader Tire Wheel

Specifications



Summerville Street Department

Prepared by Mark Campbell

CALL FOR BID

Sealed bids proposals will be received by Kathy Reeves, Public Works Admin, at the Town of Summerville Annex building at which time they will be publicly opened and read. Opening will be held on 4/01/2019 at 9:00am in the training room located at Summerville Town Hall, 200 S. Main Street, Summerville SC 29483.

Bids will be for the purpose of furnishing the Town of Summerville with one (1) Rubber Tire Wheel Loader and related equipment. A copy of the instructions to bidders and specifications are included in this package.

The Town of Summerville reserves the right to reject any and all bids, to waive all formalities and to award the contract, as it appears to be in the best interest of the Town of Summerville. The right is also reserved to hold any and all bids for a period not exceeding sixty days (60) days from the opening thereof.

Questions concerning the equipment specifications may be directed to:

*Daniel Corbin, Maintenance Director, Town of Summerville
(843) 851- 4117

All bids must be summated to:

Town of Summerville
Attn: Kathy Reeves, Public Works Admin
200 S. Main Street
Summerville, SC 29483

With the package marked as **“Wheel Loader”**

Intent

The intent of these specifications is to cover the requirements of a **Rubber Tire Wheel Loader**

The design of the unit shall incorporate the latest available technology and engineering capacities.

The unit shall be new of current manufacture. No prototype, demo, used, or mechanical type Wheel Loader will be accepted.

All parts not specifically mentioned which are necessary to provide a complete Rubber Tire Wheel Loader shall be included in the bid and shall conform in strength, quality of materials, and workmanship to what is normally provided to the trade in general.

The proposed unit bid must be a regularly manufactured unit with at least ten (10) references available (please provide references with bid).

The Rubber Tire Wheel Loader shall meet or exceed all OSHA, federal and state regulations and requirements.

The chassis for this wheel loader is to be sufficiently rated to transport a full load of debris at speeds up to 20/25 MPH. For safety and comfort of the operator and for quick, local service along with local availability of repair parts, the chassis will NOT be a custom built chassis built by the wheel loader manufacturer.

Each bidder must check either "Yes" or "No" for each section. If "Yes" is checked, bidder will be expected to supply exactly what is described. If "No" is checked, please provide a detail explanation of the deviation, no matter how minor it may be. If the bidder fails to respond either "Yes" or "No", the bid will be rejected for non-compliance.

Bidders must indicate comply or non-comply in each hopper throughout the bid. Failure to do so may be cause to reject the bid. All non-comply answers will be fully explained on a separate sheet of paper and be attached to and submitted with bid. Failure to explain non-comply answers may be cause to reject bid.

Rubber Tire Wheel Loader

SPECIFICATION SHEET

Vehicle Summary:

Loader shall be a diesel powered cab & chassis.

State year, _____

Vehicle shall comply with all applicable federal laws.

Vehicle shall comply with all applicable state laws.

Vehicle Weight Ratings:

Vehicle shall have a maximum GAWR 20,000 lbs. Capacity.

Basic Speciation's:

Engine net power shall be at least 95 hp.

Engine gross power shall be at least 101 hp.

Machine operating weight shall be no less than 18,000 lb

Machine shall come with a 4 in 1 bucket with bolt on cutting blades on all three edges.

Rated bucket capacity shall be minimum of 1.7 cubic yards.

Reach at maximum lift at 45 ° dump shall be minimum 3'6"

Dump clearance at maximum lift at 45 ° dump shall be a minimum 8'6"

Bucket clearance at maximum lift and carry dump shall be at minimum 2'7"

Loader shall be capable of running a minimum of 20 mph.

Engine:

Engine shall be EPA Tier III compliant.

Engine shall be four-cylinder, water cooled and have direct injection.

Individual wires in the wiring harness shall be color-coded and numbered every 2" for easier diagnosis and servicing.

State if Fuel System has a direct injection rotary fuel pump with individual adjustment-free injectors.

Engine shall have field replaceable dry cylinder liners.

Deutsch (DT) connectors shall be used to improve wire harness reliability by locking out dust and moisture.

Direct electric 24 volt starting and charging system shall be standard with a minimum of two 12 volt 900 CCA maintenance free batteries and minimum 80 amp alternator for the cab and canopy.

Wiring harnesses shall be securely fastened throughout the machine.

Wiring harnesses shall be wrapped with abrasive resistant braided nylon material to prevent accidental damage and short circuits within the system.

Starting aid for improved starting in extremely cold temperatures shall be standard.

Fuel priming pump and fuel/water separator shall be standard.

All loader fluids shall have a replaceable spin-on type service filter.

Electrical System:

Loader shall have a 24-volt negative ground wiring system.

Loader shall have a 24 volt Alternator @ 80-amp minimum.

Loader shall have a minimum of two, 12-volt MF batteries total min CCA 1800.

Loader shall have a Positive post for jump-starting.

Loader shall have a Solid-state circuit protection and fuses.

Loader shall have an electric back up alarm 87-112 DB.

Powertrain / Transmission:

The hydrostatic power train shall provide dependable and smooth operation with a single lever control for easy and precise control of direction changes.

An inching function shall be available to allow momentary travel speed as low as zero with full engine rpm.

A creeper control that allows variable function of travel speeds with full engine rpm shall be available.

A remote transmission control that adds a forward/neutral/reverse switch on the implement lever and directional indicators on the instrument cluster shall be available.

State if a rabbit/turtle (High/Low) switch is provided and if full rim pull be available in either mode.

Machine shall have a minimum of two (2) forward gears and one (1) reverse speed with a minimum of 20 mph forward speed. Machine shall have closed-loop hydrostatic system for high performance.

State if machine has a single-path, variable displacement pump (axial piston type) and two variable displacement motors (bent axis type) driving fixed ration gear box on rear axle.

Specify Other: _____

Machine shall be capable of full power directional changes.

Brake System

Service brake shall feature completely closed and sealed standard inboard oil-immersed disc brakes on front and rear axles that are adjustment free.

Low-effort hydraulic braking system shall be standard.

Hydrostatic drive shall be variably neutralized during braking.

Hydrostatic system shall provide additional hydraulic braking capacity.

State if parking brake to be mechanical, shoe-type mounted on driveline for positive manual operation.

Other: _____

The transmission shall be automatically neutralized when parking brake is applied.

Axles

Front axle shall be rigid mounted to the front loader frame.

Rear axle shall have an oscillation trunnion to allow the rear wheel to raise or drop. State maximum travel (Raise / Drop) Inches: _____

The rear axle shall oscillate a minimum of: $\pm 10^\circ$.

Rear axle shall have a remote trunnion lubrication fitting to simplify maintenance.

Limited Slip Differentials shall be available on front, rear or both axles.

Specify: _____

Seals on the axle and housing shall keep oil in and lock contaminants out to prevent contamination of internal components.

Axle shall have Inboard fully-enclosed brakes and final drives.

Planetary reduction gears shall be inboard mounted for optimal protection and durability.

Final drives shall have high contact ratio gearset to reduce noise levels during meshing.

Steering

Steering articulation angle shall be a minimum 40° .

Steering angle in each direction shall be a minimum 40° .

Machine shall have two steering cylinders with a minimum bore of 2.4.

A fully hydraulic power steering system shall feature center-point frame articulation, front/rear wheel track.

State if a dedicated fixed displacement steering pump provides flow at all engine and ground speeds.

Hydraulic output at 2300 rpm and 1,000 psi shall be at least 15 gal/min .

High impact rubber steering stops shall be standard.

Adjustable steering system shall be available for operator comfort.

Secondary steering system shall be available.

The adjustable steering console shall lift easily out of the way.

Brake pedal shall function as a brake and transmission neutralizer so the operator can maintain high engine rpm for full hydraulic flow and fast cycle times.

Wheels & Tires

Standard tire size shall be 17.5-R25 E3/L3 (Non-Cleats)

Rim shall be 1 piece wheel

Hydraulic System

Machine shall have an open centered hydraulic system with low effort pilot operated controls.

State if Hydraulic output minimum at 2,000 engine rpm shall be 1,000 psi with SAE 10W oil at 150 ° F and have a minimum flow of 10 gal/min.

Hydraulic cycle time shall be 12.5 seconds or less.

Hydraulic implement pump flow shall be 10 gal/min.

Fixed displacement implement, gear-type pump shall be directly connected to engine output.

Relief valve setting shall be 3,600 psi maximum.

Lift cylinders shall be double acting.

Tilt cylinder shall be double acting.

YES

NO

State if machine shall have a pilot safety valve to disable implement functions and standard hydraulic oil cooler that tilts out for easy cleaning of heat exchangers and full flow filtering.

A Ride Control system shall be installed for smooth operation in rough road conditions. Ride Control must engage automatically at 5mph and disengage under 5mph. System must have a manual switch on dash to turn on/off Ride Control.

Hydraulic tank shall have a shut-off valve at outlet supply for servicing system.

Hydraulic tank shall have a drain plug at bottom of reservoir

Cab Interior

Loader interior shall be vinyl upholstery.

Loader interior floor mat shall be black rubber.

Loader shall have heavy-duty cab insulation (silencer package)

Loader shall have an Integral heater, defroster, and air conditioning.

Loader HVAC system shall have electronic controls.

Loader HVAC filter unit shall be located inside cab and serviceable.

State if loader has left & right side cup holders.

Left & right side interior cab shall have entry grab handles.

Loader shall have a minimum 18" four spoke steering wheel designed for sit down driving capability and vehicle control.

Loader shall have left & right side turn signal switch.

Loader cab interior shall contain speedometer, tachometer, coolant temp, voltmeter, engine oil pressure, air pressure, transmission oil temperature, hour meter, and fuel gauges.

Loader shall have a two-speed electric windshield wiper motor with washer.

Wiper motor shall be intermittent (delay) type windshield wipers.

YES

NO

Loader shall have AM/FM stereo radio.

Loader shall have dual armrests on right side seat.

Loader shall have storage console between seats on back wall of cab.

Loader shall have interior sun visors.

Operator's Controls

Tilt steering console shall allow the operator the easily adjust the steering wheel to maximize comfort and optimize visibility.

Personal storage areas shall include places to store a lunch box, thermos, cup, coat rack and a lockable storage area.

A remote transmission control option shall add a forward/neutral/reverse control switch on the implement lever for easier operation and enhanced productivity.

Hydrostatic, closed-center steering with flow amplification shall provide fast or slow steering response, depending on the operational requirement.

The standard control package shall include a two-function wobble stick for lift and tilt control.

Electric detents shall be standard for the lift functions for raise and float, and for tilt functions for rollback/return to dig.

A creeper control shall be available to allow variable function of travel speeds while maintaining full engine RPM.

A comfort seat shall be available with ergonomically shaped seat cushions to reduce pressure on the lower back and thighs and allow unrestricted arm and leg movement. Arm rest angle shall also be available.

Seat shall include a retractable seat belt with an anti-cinch feature.

Wide lift arm spacing and linkage geometry shall maximize visibility.

Bonded, glass with silicon joints and few obstructions shall eliminate pillar obstructions and allow expansive peripheral visibility.

Front and rear wipers with washers shall be standard. Both front and rear wipers shall have washers with separate pumps and a common fluid reservoir.

Front wiper shall be intermittent.

A two door cab design shall allow easy access/egress. Both doors shall open fully and lock flush against the cab.

Steps leading up to the cab shall be wide and angled out for secure footing.

A 12V converter for powering electronics, a radio installation package, sunvisor for windshield, roll-down sun screen for rear window, external mirror package and auxiliary lighting packages shall be installed.

Machine cab shall meet ROPS and FOPS criteria as well as regulations for sound exposure.

Linkage

Machine shall use an 8-bar Parallel Linkage to simplify keeping forks level throughout the range of lift, without adjustment.

Rackback angle in the transport position shall be at least 45 ° .

Tool Options

Machine shall have a standard 3rd and optional 4th function hydraulics available for use with 4 in 1 bucket / work tools that require hydraulic power.

Bucket hydraulic circuit shall have eight positions: raise, hold, float

lower, forward tilt, rear tilt, open and close clam shell. (4 in 1 Bucket)

Controls shall be adjustable from automatic kickout horizontal to full lift.

Tilt circuit shall have three positions: tilt back, hold and dump.

An automatic bucket positioner shall be available that can be adjusted to desired loading angle and does not require visual spotting.

Third and fourth function hydraulic circuits shall be available with individual lever controls that can be locked for road traveling.

Serviceability

Engine shall be enclosed with at least one or more openings or hoods with gas struts to access to filters and service points.

Radiator and oil coolers shall be easily accessible for cleaning and surface area to ensure adequate cooling under all hot weather operating conditions.

Machine shall have a hydraulic oil sight gauge and vented hydraulic system.

The engine enclosure shall have a curved design to provide excellent visibility.

Engine enclosure shall be impact resistant, rustproof, have a lockable latch and pneumatically-assisted struts.

All service points shall be accessible from ground level.

Radiator coolant and hydraulic oil levels shall have a dipstick or sight gauges.

A swing-out oil cooler shall allow quick, easy cleaning and service to the radiator. Spin on filters for engine oil and hydraulic oil shall be vertically mounted for easier servicing.

Scheduled oil sampling ports shall be factory installed for improved access to engine, transmission and hydraulic oils.

Machine shall have a maintenance free driveshaft.

A stationary radiator and coolant hoses shall be standard.

Hydraulic oil cooler shall be standard.

Adjustment free brakes shall be standard.

Machine shall have grouped grease fittings.

Machine shall have positive torque hose clamps.

Machine to have a metal fuel fill neck .

Service Fill Capacities

Fuel tank shall have a minimum 35 gal capacity.

Cooling system shall have hot weather cooling capacity.

Front and rear axle crankcase shall each have a 3.5 gal. Minimum capacity.

Hydraulic system, including tank shall have a minimum 35 gal capacity.

Hydraulic tank shall have a minimum 21 gal capacity.

Transfer gearbox shall have a minimum of 1.0 gal capacity for the high speed version.

Operating Cost

Dealer shall state recommended oil change interval of machine. _____

Extended Life Coolant/Antifreeze shall allow for up to 6,000 hours between changes.

With required oil sampling, hydraulic oil shall have a minimum of 4,000 hour change interval.

Dealer shall recommended hour hydraulic filter change. _____

A security system shall be available to inhibit unauthorized machine use by immobilizing vital electrical circuits unless a valid key is used to start the machine.

Warranty

The loader warranty shall include the following:

- Full Machine warranty of five years or 5,000 hours **Bumper to Bumper**
- Dealer's mileage and travel time is included in the first 6 months of warranty.
(No Cost \$)
- No Cost (\$) will be charged to the Town of Summerville if machine is transported to Dealership.
(During the 5yr/5000 warranty period)
- No cost (\$) will be charged to the Town of Summerville other than mileage & travel time after the first 6 months.

An unconditional 30-day guarantee shall be submitted on the bidder's letterhead stating, "if the end user is not pleased or satisfied in the quality and performance of the proposed equipment within 30 days after delivery, a full refund including freight will be furnished to the customer." No exceptions to this requirement.

Delivery shall be included in the cost of the unit.

Training videotape shall be provided showing maintenance and operating procedures.

Complete Parts, Operating, and Service manuals for both the unit and the engine shall be supplied on 1 set(s) of cd-rom(s) and 1 set(s) of books at delivery. **No Exceptions**

The unit shall be delivered completely assembled, serviced, and ready to operate.

Dealer to state delivery date:

 No bid will be considered if left blank.

Bid submitted by:

 Name of company

 Street address

 City, state, zip

 Telephone number

 Authorized signature of bidder

 Printed name of above individual

 Date

No bid will be considered if not signed and dated.

BID EVALUATION

Bids will be evaluated using the following criteria:

- * Cost of bid.
- * Compliance with our specifications.
- * Delivery Date.
- * Operation and maintenance cost of equipment.
- * Life cycle cost of equal equipment.
- * Performance of equipment in actual operating conditions.
- * Availability of parts and service.
- * Prior experience with vendor and his product.

INFORMATION

Any questions concerning the above specifications contact:

Daniel Corbin, Department Head

Transportation Services

Phone 843-851-4117

E-mail: dcorbin@summerville.sc.gov