

CONTRACT DOCUMENTS

Contract No.11-18

**2012 or Newer Mack Model GU713 Tandem Axle Chassis with Combo Body,
Plow & Deicer or Equal**

**PREPARED BY THE
BOROUGH OF NAUGATUCK
Department of Public Works**

October 2011



BOROUGH OF NAUGATUCK

INVITATION TO BID

Borough of Naugatuck

Sealed bids will be received and opened at the Borough of Naugatuck, Town Hall, Purchasing Office (located in the basement), 229 Church Street, Naugatuck, CT. 06770, on **Monday October 24, 2011 at 11:00 a.m.**, at which time and place all bids will be publicly opened and read aloud for supplying The Borough of Naugatuck with the following:

Contract # 11-18

2012 or Newer Mack Model GU713 Tandem Axle Chassis with Combo Body, Plow & Deicer or Equal

Copies of the bid documents may be obtained at the Office of the Purchasing Agent upon submission of a non-refundable fee in the form of a check or money order payable to the Borough of Naugatuck in the amount of **\$50.00** per set. Bid documents can also be obtained at no cost from the Borough of Naugatuck web site

<http://www.naugatuck-ct.gov>

All firms obtaining bid documents must submit contact information by e-mail to whozer@naugatuck-ct.gov and jstewart@naugauck-ct.gov. Contact information must be submitted three days in advance of the bid opening to be considered. No Bidder may withdraw his bid within (90) days after the actual date of the opening thereof.

The Borough of Naugatuck reserves the right to reject any and all bids.

An Affirmative action/Equal Opportunity Employer. Minority/Women's Business Enterprises are encouraged to apply.

60 - 1.4 - Equal opportunity clause.

(a) Government contracts. Except as otherwise provided, each contracting agency shall include the following equal opportunity clause contained in section 202 of the order in each of its Government contracts (and modifications thereof if not included in the original contract): During the performance of this contract, the contractor agrees as follows: (1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment

without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) the contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: Provided, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

Sealed Bids for purchase of One (1) 2012 or newer Mack Model GU713 Tandem Axle Chassis or Equal with Combo Body , Plow & Deice System

2012 Model Year

		<u>Comply</u>	
		<u>Yes</u>	<u>No</u>
Gross Weight:	70,000 Pounds	_____	_____
Cab Dimensions	Bumper to back of cab not to exceed 116"	_____	_____
Wheelbase	210 (Maximum) Center of Front Axle to the Center of tandem. Body to properly distribute weight.	_____	_____
Axle to end of Frame:	62-inch (Maximum) center of tandem to end of Frame.	_____	_____
Cab to Axle:	108" inch (Maximum) Back of cab to center of tandem Body and to properly distribute weight.	_____	_____
Axle Front:	18,000 lbs Pounds	_____	_____
	18,000 lbs Pounds Multi-Leaf Spring Suspension	_____	_____
Axle Rear:	52,000 Pounds (Minimum) – 6:34 Ratio With a rear axle ratio of sixty (60) MPH.	_____	_____
	Bronze Trunion Bushings	_____	_____
	Double Reduction Gearing (No Exceptions)	_____	_____
	Cast Iron Axle Housings	_____	_____
	Transverse Torque Arms for Rear Axle	_____	_____
	54 "Axle Spacing	_____	_____

Bidder: Specify Rear Axle Make and Model _____

		<u>Yes</u>	<u>Comply</u>	<u>No</u>
Axle Equipment:	Power Steering SD110 integral power with 18,000 lbs. Capacity or equal.	_____		_____
	Front wheel seals stemco or equal	_____		_____
	18N HD with Coated Splines	_____		_____
	17N Heavy Duty inter axle drive shaft	_____		_____
	All Drivelines splines shall be coated	_____		_____
	Front Shock absorbers	_____		_____
	Protective Nylon Spacers for All Wheels	_____		_____
	Rear Wheel Seals Chicago Rawhide	_____		_____
	Front and Rear Dust Shields	_____		_____
Brakes/Parking:	Anchor lock spring on all Four- (4) Wheels	_____		_____
	Type 30/30 brake chambers	_____		_____
	Chambers MGM TR-T Tamper Resistant	_____		_____
Brakes / Service:	Full air with Anti-lock Feature	_____		_____
	All lines to be heavy-duty Nylon reinforced Hoses, include SAE fittings for air, oil, and fuel lines	_____		_____
	“S” cam front brakes and rear brakes	_____		_____
	Front brakes 16.5” x 6 “Meritor “S” Cam Q Plus	_____		_____
	Rear brakes 16.5 “x 7”Meritor Heavy Duty Q Plus	_____		_____
	Haldex 2000 Auto Slack adjusters’	_____		_____
	Bendix Heated Air dryer	_____		_____
	Anti Lock Brakes with Traction Control Switch	_____		_____
	Hand Control for Rear Service Brake	_____		_____
	Manual Drain Valves Lanyards on all Tanks	_____		_____
Heated Air Tank Valves	_____		_____	

Cab Dimensions and Safety Features are Critical to Specifications

		<u>Comply</u>	
		<u>Yes</u>	<u>No</u>
Cab:	Conventional type	_____	_____
	Heavy Duty Welded Galvanized Steel Cab	_____	_____
	Severe Duty Cab mountings and brackets	_____	_____
	Two (2) Air bag type suspension with shocks one on Each side of Frame Rail Mounted to Cab	_____	_____
	Custom interior to include padded doors, headliner and rear panel. (No Plastic or Paper Material Type Panels	_____	_____
	Cab to be Factory Under -Coated Five (5) year rust through warranty.	_____	_____
	Cab to be rust proofed	_____	_____
	Chassis running gear to be Black polyurethane	_____	_____
	(2) Overhead Storage Compartments and (1) for CB Mounting. Netting required over each compartment	_____	_____
	4" Front Fender Extensions	_____	_____
	5lb Fire Ext. Mounted LH of Driver's Seat	_____	_____
	Dual Bright Finish Air Intake	_____	_____
	Rear Storage Pouch	_____	_____
	Brite Finish Stainless Steel stationary Grill Radiator Mounted	_____	_____
	Exterior Sun Visor	_____	_____
	Steel Radiator /Grill Guard Stationary/Hood must tilt without tilting Grill	_____	_____
	Roof Mounted Dual air horns one on each side of Cab with Snow Shields	_____	_____
	Dual City horns	_____	_____
	Windshield wipers shall be two speeds with Intermittent Feature.	_____	_____
	Tinted Heated Two Piece Windshield shall be factory installed to Extend from Top of Cab Pillar and across the bottom full Length of windshield (Factory Installed)	_____	_____

Cab Continued:	<u>Yes</u>	<u>Comply</u>	<u>No</u>
Gauge Cluster to include Exhaust Pyrometer, Transmission Temperature	_____		_____
L.E.D Roof Marker Lamps (Not to be mounted on Sun Visor)	_____		_____
Single Vertical Exhaust Tail Pipe Side of Cab	_____		_____
Air suspension Drivers Seat model 915 mid back Vinyl and with Inboard Arm Rest	_____		_____
Single passenger Seat with integral Tool Box Storage	_____		_____
Infinite adjustable Steering Column Tilt/Telescopic	_____		_____
Steel front bumper	_____		_____
Integral Air conditioning	_____		_____
Interior and Adjustable Door Hinges	_____		_____
Am/Fm/CD Radio Stereo with weather band Cowl mounted Antenna left side.	_____		_____
Automatic Radio Shut –Off when Truck is shifted into Reverse.	_____		_____
C B Mounting Reinforcement in Header Console with C.B Connections	_____		_____
Width of Cab Interior Door to Door 72 Inch Minimum	_____		_____
31 Inch Width Door Opening Minimum	_____		_____
Door Entry height from floor to cab door molding 50 Inches	_____		_____
Interior Front Fire Wall to Rear of Interior Cab 57”	_____		_____
Replaceable Filter Cab Filtration System	_____		_____
Automatic Hood Lock when Hood is tilted to Forward Position	_____		_____
Instrument Cluster Display Enhanced 4.5 inch LCD Display with 4 position Stalk Control. To include Routine Maintenance monitoring.	_____		_____
Rear Cab Window 48 inches wide X 19 Inches Height	_____		_____
Passenger Side Door Visibility Window 16 3/8” x 9 3/4”	_____		_____
Wing Style Dash Board (No Flat Dash Boards)	_____		_____

		<u>Comply</u>	
		<u>Yes</u>	<u>No</u>
<u>Cab Continued:</u>	Inspection Hatch	_____	_____
	Stainless Lighted and Heated 3 Point Fold-Away Door Mounted Mirrors with 8" Heated Convex	_____	_____
	Floor Mat with Replaceable Wear Sections	_____	_____
	Suspended Brake and Accelerator Pedals	_____	_____
	(4) Interior Dome Lights to include one driver Two general illumination and one passenger map Reading.	_____	_____
	Full Warning Dash Lamp System Central high mounted LCD. 8 standard gauges and 24 indicator lamps	_____	_____
	Maintenance due indicator, Engine Hour, Ambient Temp. Sweet Spot indicator.	_____	_____
	Tilt Fiberglass Hood with Heavy Duty Hinges	_____	_____
	Provide Six (6) Additional Switches 2-15A, 1-20A IGN, 1- 10A IGN, 1 -15A BAT., 1 -20A BAT.	_____	_____
	Marker and Clearance Lamps L.E.D Type	_____	_____
	Windshield Washer Reservoir Mounted external Back of Cab	_____	_____
	Dark Gray Interior	_____	_____
Frame:	120,000 PSI Steel, all Huck bolted construction	_____	_____
	RBM 2,820,000 Minimum inch per Rail	_____	_____
	20" Integral Front Frame Extension	_____	_____
	Extended Front Bumper	_____	_____
	Front and Rear Tow Hooks	_____	_____
	Stationary Radiator Guard	_____	_____
Electrical:	Battery Box Location Right Hand under Cab Forward of Fuel Tank. No in Cab or under Cab compartment type battery boxes..	_____	_____
	Flaming River Big Switch Battery Disconnect	_____	_____
	Aluminum Battery Box Cover	_____	_____
Cross members:	Heavy Duty I-Beam Back of cab and intermediates	_____	_____

Fuel Tanks:	Left Hand Side One 72 Gallon Aluminum (Minimum) with integral 6.6 Gallon DEF Tank .	_____	_____
	All Tanks Must be mounted under Cab entry Doors with opened grated steps.	_____	_____
Front Springs:	18,000 Pounds Minimum	_____	_____
Rear Springs:	52,000 Pounds Minimum Capacity walking beam type Or Multi – Leaf Camel Back	_____	_____
	No Taper leaf, Air Bag or Parabolic type suspensions	_____	_____
	Bronze Trunion Bushings	_____	_____
	54” Axle Spacing	_____	_____
	Transverse Torque Rods Rear Axle	_____	_____
Tires Front:	Tubeless must meet GVW 315/80R22.5 20 Ply G286 Tread design or equal.	_____	_____
	Steel Wheels 9.0 x 22.5 10 Hole Hub Piloted	_____	_____
Tires Rear:	Tubeless 11R24.5 16 Ply M8431 tread design or Equal.	_____	_____
	Steel Rims 24.5 x 8.25 10- Hole Hub Piloted	_____	_____
Transmission:	Allison Automatic 4500 RDS 6-Speed	_____	_____
	Dash Mounted Shifter	_____	_____
	Transynd Synthetic Fluid	_____	_____
	Temperature Gauge	_____	_____
	Aluminum Flywheel Housing	_____	_____
	Manufactures Extended Warranty five (5) Years	_____	_____
	Scan Select Mode	_____	_____

Engine shall be Federal EPA Certified and Compliant to all 2010 EPA Emission Standards. The use of Selective Catalytic Reduction (SCR) Technology shall be used. Nitrogen Oxides (BSNOX) 0.2 g/bhp-hr, grams per horse power hour, .01 Particulate Matter (PM) grams per horse power hour at the Tail Pipe. Diesel Exhaust Fluid (DEF) Tank shall be mounted on frame rail along with a Diesel Particulate Filter (DPF) Technology. (There is No Exception to this Item)

No Deviations to Minimum Specifications

Engine:	Turbo-Charged Diesel 405 Peak HP@ 1500-1900 RPM Minimum	_____	_____
	1480 lb.ft. Torque at 1200 RPM Minimum	_____	_____
	405 Peak Horse Power @ 1500-1700 RPM	_____	_____
	Cooler EGR	_____	_____
	High Pressure Unit Injection System, Six (6) Units one per Cylinder	_____	_____
	2000 bar pressure capability for fuel economy	_____	_____
	Single Overhead Cam with roller followers 4 Valves per cylinder	_____	_____
	Hand Primer pump for fuel system	_____	_____
	Borg Warner Cooling Logic Fan	_____	_____
	Electronic Modules to monitor fuel timing, coolant Temperature, coolant level, and oil pressure	_____	_____
	Electronic Engine Module shall monitor engine Components and a separate control module to Monitor cab control shall be mounted inside Cab.	_____	_____
	Single Poly "V" Belt with automatic tensioner	_____	_____
	Spin –on Fuel Filters, Water Filter and Dual (Two) Full Flow Oil Filters.	_____	_____
	Spin-on Engine Coolant Filter	_____	_____
	Single Variable Geometry Turbo Charger	_____	_____
	Cab Mounted Vertical Muffler and Pipe With Heat Shield .Curved Tailpipe No Horizontal Mufflers	_____	_____
	Bug Screen Radiator Mounted	_____	_____

**Bidder: Specify
 Engine Make and
 Model: _____
 Engine Equipment:**

Engine Continued:

	<u>Comply</u>	
	<u>Yes</u>	<u>No</u>
Exhaust After-Treatment System Diesel Particulate Filter Ceramic Passive Regen-2010	_____	_____
Diesel Particulate and SCR mounted Right Hand Side of Frame Rail	_____	_____
Air Cleaner with Dual Air Intake Winter Control Option Snow Plow Operation Under hood and External Intake shall be controlled by a dash mounted switch.	_____	_____
Alternator 12 Volt 130Amp (24SI) Minimum	_____	_____
Batteries (3) 12Volt M/F1000/3000 CCA Minimum,	_____	_____
In addition this system must monitor Fuel Flow, RPM/ Timing, when ever any of these three Exceed normal levels the system shall shutdown the Engine. This shall also prevent Engine Run Away And shall be incorporated through the Electronic Module.	_____	_____
Engine Brake Compression Type Brake Power Two Stage Hi-Lows	_____	_____
Exhaust Type Engine Brakes will not be Accepted	_____	_____
120 Volt Plug-in Engine Block heater with recessed Plug mounted under driver's side door	_____	_____
Electronic Air Cleaner restriction gauge dash mounted	_____	_____
Fuel Heater with integral Filter and Manual Drain	_____	_____
Silicone Hoses radiator heater and engine draw Down.	_____	_____
Gear Driven Air Compressor 18.7 cfm	_____	_____
Maximum available cooling system compatible with Engine specified.	_____	_____
Extended Life -40 Degrees Coolant Protection Brand Texaco # 16447	_____	_____
Engine Cold Start Aid Electric Pre Heater	_____	_____
Engine Protection Shutdown System to reduce power As condition worsens, Alert Driver through Yellow, then Red Warning Lights	_____	_____
Under Hood Molded Engine Compartment Protection from road debris. Non-Removable Protectors.	_____	_____

**Front Crankshaft P.T.O Adapter for local installation
of front mounted Hydraulic Pump.**

Comply
Yes No

Paint:

Cab: Per the customer specifications Single Color
Red with Clear Coat Polyurethane
Chassis: Black

Additional equipment:

Auxiliary Plow Lamp Provisions with Dash Mounted
Switch and Power Supply. 24” Leads bundled at Grill

L.E.D Lamps Facing Rearward Mounted on Driver
and Passenger Steps with dash mounted Switch

Manual air tank drain valves for all tanks with
Pull Cords

Rubber Mud flaps Body and Front Fender

One Parts Manual

One Service Manual

One Operators Manual

One Electronic Engine Manual

All bidders of chassis must be an Authorized Dealer
Of Truck Chassis and an Authorize Dealer to perform
All Engine, Transmission, and Rear Axle Warranty
at their Dealership

Transmission Programmable Scan shall be provided

Extended Warranty Requirements:

**All Extended Warranty Requirements Must Be Registered and Applied
Under Vocational Applications (No Exception)**

12 Months Free Towing for Warranty Related Failures

Engine:

2 Years / 250,000 Miles 100% Parts and Labor,
Engine to Engine Connections. Idler Hub, Intake Manifold Castings, Main Bearing Bolts, Main Bearing Caps, Oil Cooler Core and Piping , Oil Cooler. Housing, Oil Fill Tube and Cap, Oil Pan, Oil Pump, Oil Pump Driven Gear, Oil Supply Hoses Engine to Engine Connections. Piston Rings (Wear Out Not Included). Piston, Piston Pins ,Snap Rings, Rocker Arms and Shafts , Seals and O Rings, Tensioner Pulleys and Bracket, Thermostat Housing and Thermostat, Thermostat Side Cover Timing Gear and Gear Plates , Turbo Charger.

Turbo Charger Drain and Feed Tubes, Turbo Charger Wheel Speed Sensor, Valve Cover, Valve Guides, Keepers, Rotators, Seats, Springs, Valves, Valve Yokes and Yoke Pins, Vibration Dampener Crank and Cam. VTG Actuator, Water Manifold and Piping, Water Pump, Water Pump Housing.

Transmission:

5 Years Extended Warranty 100% Parts and Labor

Combination Dump Body/Material Spreader and Snow Plow Hitch Specifications

These are the minimum detailed specifications to describe a snow removed package to be installed on the town's ten (10) wheel cab and chassis with a 120 inch cab to axle measurement.

The equipment will meet all requirements of State contract number 09PSX0234.

All deviations from this specification must be addressed by the prospective bidder in writing and submitted with bid.

Body General Description

Heavy duty body serving as a dump body or transformed to a sand/salt/material spreader by means of a hydraulic conveyer floor with an 1800 gallon anti ice tank.

The equipment package will be from the state contract 09PSX0234

Description		
Safety and Accessories		
Ladder, appropriately braced, forgiving style, with self-cleaning steps and grab handle located at left front corner of body.		
Stainless steel holder for two chock blocks		
Stainless steel shovel holder with 5/16" snapper pin		
Safety leg to hold the body in raised position		
Eleven safety stickers		
Center mud flap to protect rear brake chambers		
Four rubber mud flaps		
Owners manual, Parts & Repair, Training CD		
Hydraulic System		
The System is to be furnished and completely installed to power and control all hydraulic requirements satisfactorily, both independently and collectively to include drop in spray system.		
Rexroth transmission mounted direct mounted		
Control valves with air quip test fitting (inlet with relief, plow up and down, left and right, body up, side dump up and down with down pressure relief and power beyond). Stainless steel Rexroth valve box with stainless steel hardware.		
Diverter valve shall be installed to allow the plow section of the valve to operate the hydraulic load cover		
The controls are air operated with RC440 for the spreader controller, body up lever safety lock, and engraved plaque to identify lever functions		
The sander controller to include palm pilot and infrared down load		
Hydraulic tank to be mounted behind cab vertically, 37 gallon capacity, with low oil sender, breather cap and sight/temp gauge		
Shut off valves, to be 1/4 turn ball shut off valves		
Return filter will be 10 micron spin on type, with 15-psi relief		

by-pass and conditions indicator gauge		
Hydraulic manifold, all return line to be routed into centrally located manifold		
Hydraulic pipes to deliver and return hydraulic oil from control valve to plow functions to be, integrated, modular, ½ “ ID. Stainless steel tubing. 065 wall custom bent and mounted in cushion clamps. Not to obstruct normal maintenance times. Extended lengths of hydraulic hose will not be accepted.		

Hydraulic System (continued)	Yes	No
Pressure and suction line to pump appropriate size to meet system requirements. Joined with hydraulic hose at flex point		
Hydraulic hose may only be utilized at flex points and must have swivel fittings on both ends for ease of replacement if necessary		
Electric and Lighting		
Plow lights will be Truck lite #80800 mounted on the hood with custom stainless steel fender brackets		
A Trucklight completely sealed system with truck light junction box, all terminals coated with silicone dielectric grease		
Premium Electrical system with the following: Trucklight lighting system with complete independent electrical circuitry utilizing a constant duty solenoid, buss bar, and circuit breakers mounted in enclosed box in cab		
Laminated electrical Schematics of allied lighting shall be included		
Spinner light – TruckLight		
Load Light - TruckLight		
ICC lighting – Trucklight with Lexan, heat and shatter resistant lenses		
Back up alarm – audible SA917 B4 ECCO		
Body up alarm – visual and audible		
Trailer plug – 12080 7 Pole		
All auxiliary electrical components to be powered by self-contained, circuit breaker protected, electrical distribution system		
Strobe System		
Whelen LED NE with front dual head LED and rear post with rear side post LED. The whelen lights will include full length harness run in conduit lights arre in recessed stainless steel bosesmounted in rear corner posts of dump body		
Load Cover		
Hydraulically operated via the Central Hydraulic System		
Asphalt Canvas-By Power Cover of Waterbury. No exceptions. With 2 year warranty. MTD by Power Cover		
Plow Frame: Henderson		
Shall be manufactured by a recognized snow plow manufacturer.		
Frame attachment shall be manufactured in such a way as to allow the hood of a chassis fitted with a tilt engine cowl and stationary grill work to tilt forward		

over the upper portion of such attachment		
Side plate 1/2" inch thick, reinforced and bolted as far back on the truck frame as possible		
Top cross members and vertical risers shall be constructed of 4"x3" x 1/2" angle		
Bottom member is to be of 15"x 4 1/2" x 1/2" C-Channel, interlaced with vertical members. Two (2) sets of dual push centers 30.5" and 21" OC with three (3) heights. Cylinder brace mounting bracket will be mounted to this member		
Lift yolk to be constructed of 1/2" steel sides to form a frame 1 1/8" tube pivot and 1/4" plate for top. Yolk to pivot on a 1" diameter full width bolt with castle nut and cotton pin.		
Cylinder to be double acting, 4" bore x 10" stroke		

Paint		
All non stainless body parts requiring paint shall be sand blasted, primed, and painted		
All spot painting shall be properly prepared and primed before the finish coat is applied		

The package will include all the state minimum equipment.

20 Ton Pintle Assy on 5/8" plate with D-rings & Electric Plus To be included in base price

Rex- Roth – Parts & Repair Manuals

**SPECIFICATION FOR A 201 STAINLESS STEEL
MULTI-PURPOSE ALL SEASON BODY**

GENERAL:

This specification shall describe a **HENDERSON 201 STAINLESS STEEL MUNIbody® Front Center Discharge** combination dump/spreader body or equal (front cross auger or cross conveyor NOT accepted). Bidders must submit with their bid complete specifications on the unit they propose to furnish.

<u>1</u>	MINIMUM BODY REQUIREMENTS	COMPLIANCE
1.1	Capacity to be (9.6) cubic yards struck without sideboards/ (13.8) cubic yards with sideboards	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.2	Inside length (14')	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.3	The inside of the body shall be 96" wide to maximize capacity and lower the center of gravity of the unit	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.4	Side height of (36) inches. Tailgate height of (48") sides. Headsheet height of 60 inches with internal doghouse.	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>2</u>	SIDES & HEADSHEET	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.1	One piece sides constructed of 7 ga 201 stainless steel	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Boxed formed top rails constructed of 10 ga 201 stainless steel and be of dirt shedding design	
2.2	Sides to be reinforced with (1) horizontal fully welded side brace constructed of 10ga 201 stainless steel. Horizontal bracing to be of dirt shedding design.	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.3	Lower rub rail to be constructed of 201 stainless steel and be of dirt shedding design	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.04	Head sheet and one-piece side to be 7 gauge 201 stainless steel	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.05	Head sheet shall be vertical. Head sheets which are sloped to accommodate the hoist are NOT ACCEPTABLE.	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.06	2" wide side board pockets	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.07	17" x 5" x 1/4" 201 stainless steel rear corner post are tied into a 1/4" formed channel on the front and rear lower side of bolster	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>3</u>	CONVEYOR/FLOOR	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.01	Floor Constructed of 3/16" Ar400 with 5" round floor to side radius	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.02	12.5" truck frame to body floor height for lower center of gravity and lower mounting height	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.03	1/4" 201SS formed inner sill which also forms the conveyor chain guard. 7 gauge 201SS formed outer long sills	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.04	3/16" AR400 (190,000 PSI yield, 200,000 PSI tensile strength, Brinnell Hardness of 400) conveyor bed floor	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.05	Formed 3/8" thick tie plate to fully extend between the left and	<input type="checkbox"/> Yes <input type="checkbox"/> No

	right side of the body, located at the rear of the unit. This tie plate will provide additional structural support at the rear of the body to prevent sagging at the rear corner post.	
3.06	2" diameter drive and idler shaft with 8 tooth sprockets. Drive sprockets are doubled keyed with 1/2" keys to shaft. Sprockets shall be heat treated to 50 Rockwell C hardness.	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.07	Conveyor driven by (2) 25:1 planetary gearcases and piston motors driving rear and front shaft.	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.08	28" wide conveyor	<input type="checkbox"/> Yes <input type="checkbox"/> No

3.09	D667K pintle chain (24,500 lb. tensile/strand)	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.10	1/2" x 1-1/2" conveyor crossbars spaced on every other link	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.11	The rear apron shall have a bolt on cover plate which allows for easy access to gear case	<input type="checkbox"/> Yes <input type="checkbox"/> No

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4	<u>FRONT SPINNER CHUTE ASSEMBLY:</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
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4.01	The front feed gate is 8" x 24" and shall be lever operated and adjustable in 1" increments	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.02	Spinner chute mounted between chassis frame rails. Material chute to be completely enclosed to prevent material from dropping on chassis drive shaft (NO EXCEPTIONS).	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.03	Spinner assembly must be adjustable left to right, front to back, and up and down to assure accurate placement of material on spinner disc to facilitate control of spread pattern.	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.04	10ga 20" diameter spinner disc to have replaceable machined hubs	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.05	Six (6) 10ga., 201 Stainless steel bolt-on replaceable spinner vanes for counter clockwise rotation	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.06	Spinner hydraulic motor shall be enclosed in a removable material shedding protective cover. Bottom mounts motor or drive shaft with bearings not acceptable.	<input type="checkbox"/> Yes <input type="checkbox"/> No

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6	<u>TAILGATE:</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
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6.01	7ga 201 stainless steel tailgate sheet	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.02	Full perimeter boxing with all horizontal edges sloped outward	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.03	Tailgate must be double acting (NO EXCEPTIONS)	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.04	Tailgate shall be seven panel design with (2) vertical braces and (2) horizontal braces	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.05	Flush mount, 1/2" frame cut tailgate pivots	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.06	Heavy duty offset hinge plates, 1" frame cut	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.07	3/4" latch hooks with 3/8" latch plates	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.08	1-1/4" hot rolled upper and lower pins	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.09	7 gauge 9" x 24" rear feed gate	<input type="checkbox"/> Yes <input type="checkbox"/> No

6.10	The screw jack operated feed gate. Two 1/4" diameter 201 stainless steel sliding guides are required for easy feed gate movement. The feed gate is positively locked into position with a stainless steel bushings to eliminate seizing	<input type="checkbox"/> Yes <input type="checkbox"/> No
6.11	Single brake chamber air tailgate latches with over center linkage. Pivot shafts include stainless steel bushings to eliminate seizing	<input type="checkbox"/> Yes <input type="checkbox"/> No
7	HOIST:	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.01	Front mounted telescopic hoist with small internal doghouse (maximum 12" deep).	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.02	Single cylinder, trunnion mount (inverted cylinder not acceptable).	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.03	N.T.E.A. Class ().	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.04	() stage cylinder with ()" first stage diameter	<input type="checkbox"/> Yes <input type="checkbox"/> No

	Wear and corrosion resistant nitrided cylinder tubes	
7.05	Minimum two-year cylinder warranty	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.06	Connecting pivots to have replaceable greaseless composite bushings	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.07	30 gallon side mount reservoir with oil level, sight, temperature gauge. (units with internal doghouse)	<input type="checkbox"/> Yes <input type="checkbox"/> No
7.08	5 degree oscillating cylinder collar	<input type="checkbox"/> Yes <input type="checkbox"/> No

8	REAR HINGE ASSEMBLY:	
8.01	6" x 8" x 1/2" structural angle	<input type="checkbox"/> Yes <input type="checkbox"/> No
8.02	2" 303 stainless steel hinge pins connecting to 2-1/2" hinge blocks using replaceable greaseless composite bushings for a minimal pin-to-bushing clearance.	<input type="checkbox"/> Yes <input type="checkbox"/> No

9	LIGHT PACKAGE:REFER TO WHELEN LED NE SPEC.	
9.01	Rubber mounted shock resistant stop/turn/tail light in each rear corner post. Highly visible, yet recessed for protection. Four red rears, two side mounted red rear reflectors, and two sides mounted amber front reflectors. Includes a one piece sealed wiring harness.	<input type="checkbox"/> Yes <input type="checkbox"/> No
9.02	Rubber mounted, shock resistant I.C.C. 3-light cluster, for mounting in a supplied fabricated light bar	<input type="checkbox"/> Yes <input type="checkbox"/> No

10	PAINT PREPARATION:	
10.01	All surfaces are high pressure cleaned & phosphated	<input type="checkbox"/> Yes <input type="checkbox"/> No
10.02	Primed with a high quality two component primer	<input type="checkbox"/> Yes <input type="checkbox"/> No

11	OPTIONAL EQUIPMENT:	
11.01	Conveyor cover in 3/16" AR400 steel	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.02	Sloped steel side boards	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.03	Ground speed oriented conveyor motor	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.04	Polyurethane spinner disc	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.05	Double conveyor cross bars (welded to every link)	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.06	Conveyor chain oiling system	<input type="checkbox"/> Yes <input type="checkbox"/> No

11.07	Rubber mounting pads	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.08	Side Mount access ladder	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.10	Underbody pans	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.11	LED light kit	<input type="checkbox"/> Yes <input type="checkbox"/> No
11.12	Rear spinner kit assembly	<input type="checkbox"/> Yes <input type="checkbox"/> No

**SPECIFICATIONS FOR A LIQUID ANTI-ICING SYSTEM
1800 GALLON UNIT W/MILD STEEL FRAME**

GENERAL:

This specification shall describe a **Henderson Liquid Anti-Icing System 1800 Gallon Unit with Mild Steel Frame** or approved equal. This system is to be used in snow and ice control Anti-Icing or De-Icing operations. Bidders must submit with their proposal complete Specifications on the unit they propose to furnish.

Minimum Requirements:

Compliance

System shall be capable of dispensing liquid De-Icers on a single lane at a rate of 60 gallons per lane mile at 60 mph. Yes No

The liquid De-Icer tank shall have a capacity of 1800 gallons and to be constructed out of polyethylene, natural in color, UV stabilized and to be elliptical/round in design. Yes No

Hoops to hold tank to skid shall be painted mild steel Yes No

Tank shall have integral legs and baffles Yes No

A 16" manhole with lid shall be provided in the top of the tank Yes No

Gallon markings shall be provided on one end of the tank Yes No

Tank shall have a three year limited warranty Yes No

The tank shall be mounted on a self contained skid. Skid shall be designed for use in a 22 degree Henderson Munibody Yes No

The tank skid shall have provisions for self loading and unloading Yes No

The skid shall also provide for mounting of the pump, valves and spray bars Yes No

The tank skid longitudinal shall be manufactured from formed mild steel with optional side guide wheels for loading Yes No

Steel wheels with bearings and seals, shall be provided in the front edge of the skid for ease of loading and unloading Yes No

Formed mild steel cross members shall be used under each integral leg of tank Yes No

Formed mild steel supports shall be used at each corner of tank Yes No

- Storage legs shall be provided Yes No
- The front storage leg assembly must be self actuating Yes No
- The use of lifting eyes will not be acceptable. A lift frame weldment is available for lifting the unit. Yes No
- The skid assembly shall be held into place by the tailgate latch assembly, and two ratchet binders with nylon straps shall be used to hold the assembly down Yes No
- The skid assembly shall be powder coated, for greater resistance to corrosion Yes No
- Black as standard, and other colors are available on special order in acrylic enamel Yes No
- The rear storage leg assembly shall have provisions for a travel position Yes No
- As part of the storage leg assembly, an adjustable 304 stainless steel center spray bar with 8 solid stream non-adjustable nozzles shall be provided, the spray bar assembly must be adjustable from 14 to 20 inches off the road surface. Activation & deactivation of the spray bar shall be cab operated. Yes No
- The liquid chemical pump must be a 190 gpm centrifugal pump with a 2" suction and 1-1/2" pressure ports Yes No
- The hydraulic motor shall be integral with the liquid pump. The hydraulic motor will require no more than 12 12 gpm @ 2100 psi, and must be capable of working on fixed gear pump systems or load sensing systems Yes No
- A filter will be installed after the pump to protect the flow meter, nozzles and valves Yes No
- All wiring and hydraulic hoses shall be routed away from pinch points, sharp corners and heat sources. 1 1/2" plumbing shall be provided for all liquid De-Icer pressure lines Yes No
- The system will be capable of self loading liquids from a ground based tank or mobile nurse tank Yes No
- Proper valving must be supplied Yes No
- All fittings must be glass filled polypropylene, capable of adaptations Yes No
- Check valves shall be installed at boom to minimize run-on and improve start up response Yes No

OPTION: All steel to be 201 Stainless Steel Skid & MFG Construction

Yes No

**SPECIFICATIONS FOR A REVERSIBLE SNOW PLOW
WITH COMPRESSION SPRING TRIP**

GENERAL:

This specification shall describe a **HENDERSON SNOWFOE series reversible snow plow with compression spring trip** or approved equal. This unit shall also consist of twin hydraulic reversing cylinders, steel moldboard, and continuous seam welding. Bidders must submit with their proposal complete specifications on the unit they propose to furnish.

<u>1</u>	<u>MINIMUM MOLDBOARD REQUIREMENTS</u>	<u>COMPLIANCE</u>
1.01	Height of moldboard must be (48")	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.02	Length of moldboard must be (11")	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.03	Cutting path at 35° for a (11") length must be (108")	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.04	7 GA grade 201 Stainless rolled moldboard with eight (8) 1/2" x 3 1/2" ribs for extra strength and rigidity	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.05	All welds must be continuous (skip welds not acceptable)	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.06	Bottom angle must be 4" x 4" x 3/4" with an additional 4" x 3" x 1/2" reinforcements between the cutting edge bolt holes	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.07	Top moldboard angle must be constructed of 3-1/2" x 2-1/2" x 3/8" with holes to allow moisture to escape	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.08	Two horizontal braces for added rigidity	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.09	Attack angle must adjustable to 5°, 10°, and 20°	<input type="checkbox"/> Yes <input type="checkbox"/> No
1.10	(2) 5/8" x 8" one piece cutting edge with AASHO punching-standard	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>2</u>	<u>TRIP ASSEMBLY</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.01	Full moldboard Trip with (2) two external compression springs	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.02	Trip-Spring anchor plates are encased and continuous welded to the push frame providing greater strength	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.03	Trip spring assemblies shall be constructed with (2) 1/2" thick bars which are welded to the upper spring cap assembly and (1) 3/4" thick bar, enclosed by (1) compression spring	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.04	Spring wire material to be AISI 51604 rated	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.05	Free length of 23.25", OD of 5.31", ID of 3.87" and wire diameter of .719	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.06	QTY 14.32 coils with 12.32 coils active	<input type="checkbox"/> Yes <input type="checkbox"/> No
2.07	Spring rate of 322 pounds/inch	<input type="checkbox"/> Yes <input type="checkbox"/> No
<u>3</u>	<u>Circle Frame and Push Tube</u>	
3.01	Henderson Hitch with "Level lift" design allows continuous level lift in any position	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.02	Push Frame tube to be 96" in width constructed of 4" x 4" x 3/8" square tube	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.03	Five (5) moldboard to push frame pivot points with 1-1/4" bushing pinning to two (2) 5/8" mounting ears with 1 1/4" diameter pins.	<input type="checkbox"/> Yes <input type="checkbox"/> No

	(no exceptions)	
3.04	Semi-circle constructed of 3-1/2" x 1/2" HR angle with 77.26" span at push-tube	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.05	Semi circle is further reinforced from back side of circle to push tube with two (2) 3-1/2" x 3-1/2" HR angle	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.06	Semi-circle pivot and reversing cylinders yokes constructed of two (2) HR 1/2 " plates	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.07	There shall be two (2) reversing stops constructed of 1" x 5" plate welded to circle	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.08	Moldboard attack angle brace connection plate are continuously welded to the push frame assembly and constructed of 1/2" plate with a 3" x 10" x 1/2" plate	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.09	Twin (2) 3" x 10" x 1-1/2" nitrided hydraulic reversing cylinders are double acting for heavy duty reversing	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.10	Reversing cylinders must be located above the circle frame for increased protection against road debris and for ease of maintenance	<input type="checkbox"/> Yes <input type="checkbox"/> No
3.11	Plow mounted cushion valve for reversing cylinders is standard	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.0	<u>A-Frame</u>	
4.01	A-frame sides constructed of 4" x 13.8# channel welded to 1" x 5" x 33.5" A-frame end plate. End plate to side channels is further reinforced with a 5/8" x 3-1/2" x 22.5" plate	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.02	A-frame to circle frame pivot tongue consist of two (2) 4" x 8.25" x .75" plates with a 1-3/4" x 6.75 Zinc plated pin	<input type="checkbox"/> Yes <input type="checkbox"/> No
4.03	Reversing cylinders pin to dual 5/8" thick cylinder mount on each side of A-frame	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.0	<u>PAINT</u>	
5.01	All metal surfaces are to be phosphate washed to remove slag, splatter, oxide and oil residue	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.02	Moldboard is powder-coated highway orange for increase paint durability	<input type="checkbox"/> Yes <input type="checkbox"/> No
5.03	Push frame, a frame and other miscellaneous components are powder-coated black for increase paint durability	<input type="checkbox"/> Yes <input type="checkbox"/> No

**2012 or Newer Mack Model GU713 Tandem Axle Chassis with Combo Body,
Plow & Deicer or Equal**

Bid Amount: \$ _____

Additional Information:

The Bidder agrees that this bid shall be good and may not be withdrawn for a period of ninety (90) days after the scheduled closing time for receiving bids.

Seal
(if bid is by a Corporation)

Firm or Corporation _____

By: _____
(Duly Authorized)

Street Address _____

City _____ State _____ Zip _____

Telephone _____ Fax _____

Date _____