

TOWN OF WEST GREENWICH, RI

Claude Wright
Director of Public Works
chwright@wgtownri.org

Public Works Department
280 Victory Highway
West Greenwich, R.I. 02817
Ph: (401) 392-3800
Fax: (401) 392-3805

Information for Bidders

40,000 GVW Dump Truck, Snowplow & Combination Sander Body

The dump truck and all components are to be purchased outright.

All parts not specifically mentioned, but which are necessary to furnish a complete unit, ready to work, shall be supplied.

Delivery time – Delivered to the West Greenwich Public Works Department by 12-1-21

Bids on equipment differing in Minor details from these specifications will be considered provided the equipment offered is determined by the ordering agency, Town Of West Greenwich, to be in compliance in all essential respects with these specifications. Differences shall be correctly stated and described by the bidder and subject to the Town of West Greenwich, Town Council's acceptance or rejection.

Town of West Greenwich
Department of Public Works
Specifications for 40,000 GVW dump truck & snowplow

Cab and Chassis

GVW; 40,000 lb.

Wheelbase; 163" with a Cab to Axle of 95"

Frame; Heat treated alloy steel (120,000 psi. yield) frame extension, integral 24" in front of grille

Bumper, Front; Steel, swept back

Axle, Front; Wide track, I-Beam type 14,700 lb. capacity with shock absorbers

Axle, Rear; Single reduction,, 26,000 lb. capacity with "R" wheel ends, With Driver controlled locking differential, gear ratio: 6.14

Springs, Front; Multi-leaf, shackle type / 14,600 lb. with flat leaf

Springs, Rear; 30,000 with helper and radius rod

Brake System; Air, dual system for straight truck

Includes;

Brake chambers, spring (2) rear parking

Brake lines, color coded nylon

Drain valve, twist type

Dust shields, front & rear

Gauge, air pressure – air 1 & air 2 located in instrument cluster

Parking brake valve, located on instrument panel

Slack adjusters, front & rear – automatic

Spring brake modulator valve

Trailer connections, four-wheel with hand control valve & tractor protection valve

Air brake ABS, full vehicle wheel control system (4-channel)

Air Dryer; Bendix AD-9 with heater

Air Compressor; Minimum 18 CFM

Steering Gear; Power

Exhaust System; Horizontal, stainless steel muffler, vertical tailpipe with guard & grab handle

Electrical System; 12 volt

Includes;

Battery box, under cab left side

Cigar lighter

Data link connector, mounted in cab

Headlights (2) sealed beam halogen

Jump start stud

Running lights (2) daytime

Turn signal switch, self-canceling, headlight dimmer with flash to pass feature

Windshield wiper switch, 2-speed with wash & intermittent feature

Windshield wipers, single motor, electric, cowl mounted

Wiring, chassis color coded & continuously numbered

HORNS; Air (2) aluminum 26 inch, electric (2)

Circuit Breakers; Manual reset SAE type III with trip indicators

Trailer Connection Socket; 7 way, mounted at rear of frame

Body Builder Wiring; Back of cab

Alternator; 12 Volt, 160 amps

Battery System; Maintenance free, hi-cycling, (2) 12 volt 2000 CCA total, with jump start stud remote mounted

Radio; AM/FM Stereo with weather-band, Bluetooth, clock and dual cone speakers

Front End; Tilting, fiberglass, with 2 service hatches, one on each side for servicing

Grille; Stationary, with chrome accents

Paint Schematic; Single color – GREEN– type base coat / clear coat

Air Cleaner; Dual element, heavy duty with restriction gauge in cab, with integral snow valve and in cab control

ETO Effects, Engine Front; less PTO unit, includes adapter plate on engine, front mounted

Engine, Diesel; 6 Cylinder in line, turbo charged, 50 state, minimum of 300 HP, and 860 ft-lb torque @ 1200 rpm, With engine exhaust brake, electronically activated also activates stop lights

Engine Diesel;

Includes;

Cold starting equipment, block heater (120 volt) & intake manifold electric grid heater with engine ECM control

Cruise control, electronic,

Engine shutdown, electric, key operated

Fuel/water separator and fuel filter in single assembly, mounted on engine

Governor road speed, electronic

Oil filter, engine spin-on type

Wet type cylinder sleeves

Fan Drive; Two speed type, with residual torque device for disengaged fan speed, with fan override switch on instrument panel (fan on with switch on)

Throttle; Hand control, engine speed control, electronic, stationary, variable speed,

Radiator; Cross flow, series system, 1100 sq-in aluminum radiator core

Transmission; Automatic, Allison 3500 RDS P, 4th gen. controls, wide ratio, 6 speed with double overdrive

Fuel tank; Top draw, aluminum, 70 gallon minimum

Cab; Conventional,

Includes;

Arm rests (2) one each door

Clearance marker lights (5) flush mounted LED

Coat hook mounted on rear wall

Floor covering, rubber

Glass all windows, tinted

Grab handle, cab interior one each side

Gauge Cluster; English with English electronic speedometer

Includes;

Engine oil pressure

Water temperature

Fuel

Tachometer

Voltmeter
Washer fluid level

Odometer display;
Miles
Trip miles
Engine hours
Trip hours
Fault code readout

Warning system; (visual and audible)
Low fuel
Low oil pressure
High engine coolant temperature
Low battery voltage

Seat Driver; Air suspension, high back with integral headrest, vinyl, isolated, single chamber air lumbar support, including seat belt, 3 point, lap and shoulder belt type

Seat Passenger; One person with integral headrest, including seat belt, 3 point, lap and shoulder belt type

Air Conditioner; With integral heater and defroster, HFC – 134A refrigerant, HAVC fresh air filter

Cab Interior Trim; Deluxe,
Includes;
Overhead molded plastic console with two storage pockets CB-radio pocket
Vinyl headliner
Center mounted dome light
2 cup holder and ash tray, pull out
Two sun visors
Door storage pocket

Remote Power Module; Mounted under cab, up to 6 outputs and 6 inputs, includes switch pack with latched switches

Mirrors; Two 7" x 14" with breakaway brackets, 102" wide spacing with convex both sides, with all heated heads, thermostatically controlled

Wheels Front; Disc, 22.5" painted steel, with oil lubricated bearings

Wheels Rear; Dual disc, 22.5" painted steel

Tires Front; Two, 12 R 22.5" uni-steel, load range H, 16 ply XZE

Tires Rear; Four, 12R 22.5" uni-steel, load range H, 16 ply XDS

Spare wheel & rear tire 12R 22.5" uni-steel, load range H, 16 ply XDS

Tow Hook; Two front frame mounted

Manuals; Must include a complete sets of shop service manuals, parts & operator, for all items.

Central Hydraulic System

General; The system is to be furnished and completely installed to power and control all hydraulic requirements satisfactorily, both independently and collectively.

Pump; 28 Gallon per minute min., variable displacement pump directly mounted to engine crank ETO

Valves; Four control valves – inlet with relief, plow up and down, motor spool valve for reversing locking pin plow, left and right, body up, power beyond, side dump, up & down

Control Levers; Four levers mounted in custom lever stand, with body up lever safety lock, and engraved plaque to identify lever functions

Sander Valve; 2 FFL mounted in cab on custom console

Sander hyd lines; all hyd lines to be Stainless Steel

Hydraulic Tank; To be mounted on left side of frame rail behind cab, min. 37 gallon capacity, with low oil sender, breather cap, and sight/temp. gauge

Shut off Valves; To be ¼ turn ball type shut off valves

Filter; Return filter will be 10 micron, spin on type, with 15-psi relief by-pass and conditions indicator gauge

Hydraulic Lines; All lines to deliver and return hydraulic oil, to be integrated, modular stainless steel pipe, not to obstruct normal maintenance items, hydraulic hose may only be utilized at flex points and must have swivel fittings on both ends for ease of replacement

Control Placement; To be approved by West Greenwich Public Works Department before placement

Dump Body

General; Heavy duty body serving as a dump body or transformed to a sand/salt material spreader by means of a hydraulically tilting floor

Body; All Hardox; 450,000 psi; Capacity to be a minimum of 6.10 cubic yards water level without side boards – inside width to be 88” – inside length to be 120” – outside width 97.5” – side height 27” – tailgate height 39” – cab shield 24”, 10 gauge steel, reinforced on both ends – front panel to be constructed from 3/16” steel, reinforced by two full length vertical V shaped outside breaks filled in with 3/16” plate, - sides, constructed of 3/16” steel, reinforced with two 10 gauge side posts per side, bottom of sides comes to a 45 degree formed taper, - top tube is 4” x 3” x 3/16”, - tilt side must be single wall design serving as both outer and inner wall and moving with floor as one, - two front and two rear corner posts made of 10 gauge steel

Tailgate; Constructed of 3/16” Hardox 450,000 psi steel, top ears will be made of ¾” steel, - top and bottom pins made of 1 ¼” cold rolled steel, - latches shall be over center design, - tailgate will be double acting, - when tailgate is horizontal it will be level with floor, - tailgate will be air operated, control will be inside cab of truck on left hand side of lower dash, three asphalt chutes to be mounted in lower section of tailgate

Floor; Constructed of 3/16” thick, Hardox 450,000 psi steel, 3” channel iron under the floor, - floor hinge shall be bolt on, for ease of removal, by three blocks held by 4” x 5/8” grade 5 bolts, blocks shall be grooved and fitted with grease zerks that are remote mounted to one location for ease of maintenance, pins shall be three piece, 1 ¾” in diameter made from hard induction chrome

Understructure; Two full length I beams at 25.4 lbs. per foot, three flats welded between I beams, three square tubes 3” x 3” x 3/16” traverse top of I beams joined at ends by 4” x 3” x 3/16” tube, a 3” x 1 ½” x 1/8” tube is to be welded at the front of the I beams, a 14” x 91” x 3/16” bumper is to be welded at the back of I beams

Longitudinal Conveyor; The conveyor is an integral part of the body floor and runs longitudinally down the driver's side of the body, discharging in front of the rear wheels, - removable conveyor frame to be stainless steel, removable conveyor wear plate to be constructed of 3/16” thick 180,000 yield strength steel, - conveyor cover plate in two sections constructed of 3/16” thick 180,000 psi steel reinforced with 2” x 3/16” flats, - chain maintenance system including access panel in rear apron to allow for removal of chain and slotted doghouse to allow for removal of gearbox

Chain and Driving Mechanism; Self cleaning pintle type chain, - 18 ½” overall width, - bar flights, 3/8” x 1 ¼” spaced every other link, - all chain links are to be protected by integral chain guard leaving only bar flights exposed, - chain to be driven by 25:1 ratio gear box, gearbox assembly to be installed on discharge end and bolted on, - tension of chain to be adjusted by use of two grease adjustable actuators

Spinner Assembly; Stainless Steel, Spinner shaft to be sealed type with motor on top, - hydraulic motor to be 30 cubic inch and bi-rotational, - spinner shaft contains two embedded self-greasing ball bearings, - spinner assembly to be chassis mounted and adjustable and removable, - to have an 18" urethane spreading disc, - to have a ultra light non-adhesive polyethylene chute to feed the spreading disc, - chute is to be both adjustable and removable

Hoist Cylinder; Mailhot CS-90-2 two stage telescopic cylinder, - cylinder capacity of 20 tons at 2000 psi, - base of cylinder shall be largest stage, - cylinder to be nitrated using the quench polished quench method, - minimum 2 year warranty against corrosion

Tilt Floor Hydraulic Cylinders; Must have two mailhot double acting cylinders, - cylinder size to be 3 1/2" diameter x 22 1/2" stroke, - minimum combined capacity of 19 tons at 2000 psi, - bottom cylinder brackets must be located on passenger side I beam to provide push from a place of strength, - top of cylinder must mount in base of passenger sidewall and have access ports from which cylinder pins may be accessed

Safety and Accessories; Ladder, appropriately braced, forgiving style, with self cleaning steps and grab handle located at left front corner of body, - holder for two chock blocks, - shovel holder with 5/16" snapper pin, - safety legs to hold the body and floor in raised position, - safety stickers, - center mud flap to protect rear brake chambers, - four rubber mud flaps, - two sets of owners, parts and service manuals

Load Cover; Automatic, electric, controlled from in cab, with asphalt cover

Lights; Federal lights and reflectors, backup alarm, lift alarm, - conveyor light, spinner light, - all wiring in pvc tubing and sealed junction boxes

Screens; Top screens four sections constructed of angle and 3/8" diameter mesh, with 3" x 3" openings, must not protrude above the cab shield when floor is raised

Poly Fenders; Covering rear wheels with mud flaps

Paint Color; GREEN, body

Tilt Over Type Plow Hitch

Hitch; Custom tilt over hitch,

Plow frame shall be manufactured in such a way to allow the hood of the chassis fitted with a stationary grill to tilt forward over the upper portion of the hitch

Side plates ½" thick reinforced and bolted as far back as possible on the truck frame

Top cross members and vertical risers shall be constructed of 4" x 3" x ½" angle

Bottom member is to be constructed of 15" x 4-1/2" x ½" C channel, interlaced with vertical members

Lift yoke to be constructed of ½" steel sides to form A frame, 1-1/8" tube for pivot and ¼" plate for top, yoke to pivot on a 1" diameter full width bolt with castle nut and cotter pin

Cylinder to be double acting 4" bore x 10" stroke

Paint color – black

Plow lights to be mounted on hood with custom aluminum brackets and halogen bulbs

One complete Hydraulic Power Reversible Snow Plow

Option #1 - As Stated Below

Option #2 - FE Heavy Duty Locking Pin 10' Plow
with Two (2) Separate Spring Arms (**Preferred**)

General; Length at cutting edge 10'

Cutting width at 35 degrees 9'

Plowing positions 7

Continuous curve design 10'

Moldboard height 36"

Bolt on cutting edge, included, to be edge bolt ¾" thick x 8" x 10'

Vertical ribs 8

Horizontal reinforcements 2

Moldboard blade angle, adjustable

Lifting height 16"

Moldboard; Top edge shall have a built in full length snow deflector, it shall extend forward beyond the cutting edge a minimum of 12"

It shall be 11" long and 3" high

It shall be from not less than 8 gauge HR sheet and shall be brake formed for additional rigidity, (not rolled)

It shall have a box break of the same material at the top edge for additional rigidity, and shall be provided with 8 one piece ½" plate vertical ribs

The bottom of the moldboard shall be reinforced by not less than 5" x 5" x ¾" angle

It shall be equipped with two 10 degree moldboard shoes made of abrasion resistant steel, minimum brinell hardness of 360

Cutting Edge; Shall be of abrasion resistant steel, C-1085 or equal

It shall be not less than 8" x ¾" thick x 120", and shall be bolted to the plow for easy replacement with 5/8" x 2 ½" grade 5 carriage bolts and locknuts on 12" centers

Trip Mechanism; The plow is to have 1 fully enclosed dual telescopic springs, fully lubricated, adjustable trunnion mounted,
Safety trip spring so designed to pivot from the center of the trip spring
It shall have one outer spring 5/8" x 3-7/8" id. X 19-5/8" long
It shall also have a spring cushioned shock absorbing device to absorb shock of the return moldboard after it has been tripped
Each spring to be fully enclosed in a separate tube

Push Frame; The push frame will be welded construction with 3/8" minimum formed channeled legs

The push frame shall have a fabricated swiveling latch pin mechanism to allow the plow to follow the contour of the road without strain to the plow or the truck

The power hydraulic reversing mechanism is incorporated into the push frame and has 2-1/2" hydraulic rams to do the reversing

The reversing to be controlled by a single lever from the truck cab

The rams shall automatically unlatch a locking device, turn the plow to a desired angle and lock it into the new position

When the plow is latched into a position, no-load – hydraulic or mechanical – shall be applied to the reversing rams

Cylinder Rods; All snowplow hydraulic cylinder rods shall be induction hardened and chrome plate to a minimum of .04" thickness

Paint; All snowplow components shall be shot blasted and painted with one coat of primer and one coat of finish

General

The truck and equipment furnished under these specifications shall be of the current model, production year.

All parts not specifically mentioned, but which are necessary to furnish a complete unit, ready to work, shall be supplied.

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