

Specifications: Telescopic Aerial Boom

Scope:

The following specification outlines the minimum requirements for a 63 foot working height aerial sign truck with high clearance outriggers to be utilized by the State of New Jersey, Department of Transportation. The vehicle will be utilized in all weather conditions and must be designed and constructed for its intended use. While all efforts have been made to fully detail the construction materials, methods, and equipment required to accomplish this task, it remains the vendor's responsibility to choose components that will provide maximum performance, service life, and safety and not just meet the minimum requirements. The vehicle is to be designed and constructed to provide a minimum 10 year life expectancy. Any item necessary for the normal and intended use of the vehicle will be supplied by the Vendor even if it is not fully detailed by the specifications.

Aerial Boom 63 Foot Working Height

Telescopic Aerial Device with a three stage, hydraulically sequenced, non-insulated, steel telescopic boom or equivalent.

Ground to Bottom of Platform Height: minimum 58 feet at 10 to 11 feet from centerline of rotation

Working Height: Minimum 63 feet

Reach to edge of platform: 54 to 55 feet at 8 to 9 feet platform height

The boom shall have Continuous Rotation

Upper Boom Articulation: +75 to +85 degrees.

Lower Boom Articulation: -15 to -25 degrees.

Upper Controls: The upper control system includes an electric over hydraulic proportional joystick.

Lower Controls: A lower control station is located on the turntable. A selector valve is provided to override the upper controls.

The Boom must meet or exceeds latest revision of ANSI 92.2 standards.

Steel platform minimum 60 x 40 inches with a minimum 600 pounds of platform capacity and 90 degrees of platform rotation.

Hydraulically leveled platform allows for +/- 45 degrees of rotation. Leveling controls provided in the platform and at the ground controls provide precise leveling capability.

Platform receiver tube for mounting the hydraulic jib winch mast or a working light.

Multiple Function, Single Handle Controller - Single, multi-axis joystick for proportional

Aluminum Jib - Platform mounted with minimum 500 pound capacity and a minimum three (3) manual pinning positions.

Telescopic Material Handling Pegs - Platform mounted with a maximum 100 pound capacity and up to 6 in of extension beyond front of platform

A Planetary winch to be installed on the base boom cable guides shall be included where needed. Winch line can be two-parted at 2,950 pounds to achieve a total pick of 5,900 pounds.

A winch line tensioner to be supplied to maintain constant tension on the winch line.

Primary Outriggers shall have the ability to extend over a 30 inch high guard rail before lowering

Auxiliary Outriggers shall have the ability to extend over a 30 inch high guard rail before lowering

A rotational interlock system to be supplied allowing for short jacking of outriggers by automatically restricting the boom's rotational envelope.

Boom, mast and basket to be painted or power coated with the manufactures standard color

Hydraulic

Hydraulic Reservoir minimum 30 Gallon

Standard Hydraulic PTO/s and Pump/s that meet all the requirements to operate the boom and outriggers.

Body

Flatbed Body approximately 172 inches long X 96 inches wide to be Constructed Utilizing a Steel Perimeter with Stake Pockets every 24 Inches. The Perimeter Shall be attached to 4 Inch Structural Steel Crossmembers. Inside the Steel Perimeter shall be a 2 Inch Thick Wood Flooring Attached to The Steel Crossmembers.

Storage Box

Thru box tool compartment approximate size 32 inches long x 28 inches high x 102 inches wide. To be mounted to the front of the platform body.

Basic body fabricated from rust resistant alloy steel.

All doors are full, double paneled, self-sealed with built-in drainage for maximum weather-tightness. Stainless steel hinge rods extend full length of door.

All edges are either rolled or folded for strength and safety.

Steel treated for improved primer bond and rust resistance.

Automotive type non-porous door seals mechanically fastened to the door facing.

Finish paint black.

Street side: Transverse storage box with one (1) transverse shelf that extends to curbside.

Curbside: Transverse storage box with one (1) transverse shelf that extends to street side.

Body, Out Rigger, Safety and Chassis Accessories

Cantilevered catwalk over the chassis cab on the street side with gripstrut walking surface for platform access.

ICC (Underride Protection) bumper with integral fixed Grip Strut steps on curbside and street side

T-100 Style Pintle Hitch (30,000 LB MGTW with 6,000 LB MVL)

Compartment Top Access Step from Body Floor

Platform Access Step from Top of Body Compartment

Wood Outrigger Pad, 19 Inch x 19 Inch x 2.5 Inch, With Rope Handle

Outrigger Pad Holder, 20 Inch L x 20 Inch W x 5 Inches H, Fits 19.5 Inch x 19.5 Inch x 4 Inches And Smaller Pads, Bolt-On, Bottom Washout Holes, 3/4 Inch Lip Retainer - Installed on outrigger legs.

Pendulum Retainers for Outrigger Pad Holders

Mud Flaps

Wheel Chocks, Rubber with Metal Hairpin Style Handle, 9.75 Inch L X 7.75 Inch W X 5.00 Inch H(Pair)

Wheel Chock Holders (Pair), For Installation under Flatbed

Removable grab handle, installed in stake pocket with pin.

Underbody Storage Box, Steel, 42 Inch L x 24 Inch W x 24 Inch H, One (1) Drop-Down Door, One (1) Rotary Paddle Latch, Chain Stops, Painted Black (1) each side of flatbed.

Safety Harness and 4.5' Lanyard (Fits Medium to X-large) Includes Pouch and Placards

5 LB Fire Extinguisher with Light Duty Bracket, Shipped Loose

Triangular Reflector Kit, Shipped Loose in Storage Box.
Inclinometer

Jib Holder

Electrical

Lights and reflectors in accordance with FMVSS #108 lighting package. (Complete LED, including LED reverse lights)

Amber LED Strobe Light with Brush Guard - Installed on Street side of boom rest.

Dual Tone Back-Up with Outrigger Motion Alarm

PTO Hour Meter, Digital, with 10,000 Hour Display

120 volt AC power at platform, 20 amp GFCI with weather-resistant cover.

7-Way Trailer Receptacle A.T.A Round Pin Installed At Rear

120 Volt GFCI Receptacle Includes Weather-resistant Enclosure - Installed on curbside rear.

Power Distribution Module Is A Compact Self-Contained Electronic System That Provides A Standardized Interface With The Chassis Electrical System. (Includes Operator's Manual)

Welding cable in hose carrier - 1/0 flexible welding cable with electrode and work quick disconnects at the boom tip and at turntable.
Custom Welder - Install a Miller Trailblazer 302 AirPak W/cool/sep, GFCI, Elec Fuel Pump or equivalent.

Chassis

Class 8 Truck (Example: Freightliner M2 106 or equivalent)
conventional chassis with setback axle

Medium Truck Warranty

Front Axle: 16,000 Pound with Power Steering

16,000 Pound Flat Leaf Front Suspension

315/80R22.5 20 Ply Radial Front Tires

Rear Drive Axle: 23,000 Pound

23,000 Pound Variable Rate Multi-Leaf Spring Rear Suspension with Leaf Spring Helper

11R22.5 14 Ply Radial Rear Tires

Minimum 50 Gallon Plain Aluminum/Painted Steel Fuel with Painted Bands

If Fuel Tank is mounted Under a Cab Door, the tank must include steps

Wheelbase 230 to 250 Inch

Main Frame with minimum 120 KSI

Frame Overhang Range: 91 Inch to 100 Inch

65 Mph Road Speed Limit

Cruise Control Speed Limit Same as Road Speed Limit

PTO Mode Engine Rpm Limit 1100 Rpm

PTO Mode Brake Override Service Brake Applied

PTO Rpm with Cruise Set Switch 700 Rpm

PTO Rpm with Cruise Resume Switch 800 Rpm

PTO Mode Cancel Vehicle Speed 5 Mph

PTO Governor Ramp Rate 250 Rpm per Second

PTO Minimum Rpm 700

Minimum 160 Amp Alternator

Minimum (2) 12 Volt Maintenance Free 1900 CCA Threaded Stud Batteries,
Standard Battery Jumpers

Single Battery Box with Cover Mounted To the Chassis

Three-Piece 14 Inch Painted Steel Bumper with Collapsible Ends

Front Tow Hooks Frame Mounted

Mounting For Front and Rear License Plate

Fender and Front of Hood Mounted Front Mud flaps

Engine

6 Cylinder Diesel with a Minimum of 310 HP and 750 LB/FT Torque.

Electronic Engine Integral Shutdown Protection System

Automatic Air On/Off Engine Fan Clutch without Dash Switch

Spin On Fuel Filter

Full Flow Oil Filter

Radiator Large Enough to Supply Sufficient Cooling Under Normal Operation Conditions.

Antifreeze to -34F, Extended Life Coolant

Gates Blue Stripe Coolant Hoses or Equivalent

Constant Tension Hose Clamps for Coolant Hoses

Radiator Drain Valve

Lower Radiator Guard

Minimum 750 Watt/115 Volt Block Heater

Black Plastic Engine Heater Receptacle Mounted Under Left Hand Door

Electric Grid Air Intake Warmer

Exhaust

Right Hand Outboard under Step Mounted Horizontal Aftertreatment System Assembly with Right Hand B-Pillar Mounted Vertical Tailpipe

Engine Aftertreatment Device, Automatic over the Road Regeneration and Dash Mounted Regeneration Request Switch

Integrated Stack and B-Pillar Pipe with Minimum Stack Protrusion above Cab

Right Hand Curved Vertical Tailpipe B-Pillar Mounted Routed From Step
Minimum 6 Gallon Diesel Exhaust Fluid Tank to Be Mounted Close to Fuel
Tank

Stainless Steel After treatment Device/Muffler/Tailpipe Shield

Transmission

3000 RDS Series Automatic Transmission with Power Take Off (PTO)
Provision or equivalent

Push Button Electronic Shift Control, Dash Mounted

If the Transmission is Equipped with Neutral at Stop or Fuelsense they
will need to be Disabled

(1) One or (2) Two PTO's as required (Chelsea 277 Series or
equivalent)

PTO Mounting, Left Hand and Right Hand Sides of Main Transmission

Water to Oil Transmission Cooler, In Radiator End Tank

If Transmission is Equipped with an Oil Check and Fill with Crossover
it must Clear Left Hand PTO and Direct Mount Pump.

If Equipped the Oil Check and Fill to be Clearly Marked or Labeled
with the type of oil or fluid to be used.

Air Brakes

Minimum 18.7 Cfm Air Compressor with Internal Safety Valve

Standard Mechanical Air Compressor Governor

Air Compressor Discharge Line

ABS Brakes without Traction Control

Manufactures Standard Drum Brakes on Front and Rear Axle

Non Asbestos Brakes

Reinforced Nylon, Fabric Braid and Wire Braid Chassis Air Lines

Fiber Braid Parking Brake Hose

Standard Brake System Valves

Standard Air System Pressure Protection System

Relay Valve with 5-8 Psi Crack Pressure, No Rear Proportioning Valve

Frame Mounted Air Dryer with Integral Air Governor and Heater

Steel Air Brake Reservoirs

Pull Cables on All Air Reservoir(S)

Clear Frame Rails from Back of Cab to Front Rear Suspension Bracket,
Both Rails Outboard

Manufactures Standard Brake System Valves

Standard Air System Pressure Protection System

Cab Exterior

Conventional Cab with Rubber Cab Mounts

Painted Plastic Grille

Fiberglass Hood

Operator Selectable Air Horn and Dual Electric Horns

Door Locks and Ignition Switch Keyed the Same

Rear License Plate Mount End of Frame

Integral Headlight/Marker Assembly

Amber Marker Lights

Integral Stop/Tail/Backup Lights

Standard Front Turn Signal Lamps

Dual West Coast Molded-In Color Mirrors 102 Inch Equipment Width

Left Hand and Right Hand 8 Inch Molded-In Color Convex Mirrors Mounted
Under Primary Mirrors

Standard Side/Rear Reflectors

Tinted Rear Window

Tinted Door Glass Left Hand and Right Hand with Tinted Non-Operating
Wing Windows

Manual Door Window Regulators

Tinted Windshield

Cab Interior

Black Mats with Single Insulation

Forward Roof Mounted Console with Upper Storage Compartments without Netting

In Dash Storage Bin

Cup Holders

Manufactures Standard Heater, Defroster and Air Conditioner

Standard HVAC Ducting

Standard HVAC Controls with Recirculation Switch

Heavy Duty Air Conditioner Compressor

Standard Cab Insulation

Solid-State Circuit Protection and Fuses

12v Negative Ground Electrical System

Dome Door Activated Left Hand and Right Hand, Dual Reading Lights, Forward Cab Roof

Manual Door Locks

12 Volt Power Receptacles Mounted In Dash

Manufactures Standard Vinyl High Back Air Suspension Driver and Passenger Seat

3 Point Seat Belts

Door Panel Armrests

Adjustable Tilt and Telescoping Steering Column

18 Inch Steering Wheel

Dash

Low Air Pressure Indicator Light and Audible Alarm

Particulate Filter Regeneration Required Status

Primary and Secondary Air Pressure Gauges

Electric Fuel Gauge

Electrical Engine Coolant Temperature Gauge

Transmission Oil Temperature Gauge

Engine and Trip Hour Meters Integral with-in Driver Display

Electric Engine Oil Pressure Gauge

Intake Mounted Air Restriction Indicator without Graduations

Electronic MPH Speedometer

Electronic 3000 Rpm Tachometer

Idle Limiter, Electronic Engine

Digital Voltage Display Integral with Driver Display

Single Electric Windshield Wiper Motor with Delay

Marker Light Switch Integral with Headlight Switch

One Valve Parking Brake System with Warning Indicator

Self-Canceling Turn Signal Switch with Dimmer, Washer/Wiper and Hazard In Handle

Integral Electronic Turn Signal Flasher with Hazard Lamps Overriding Stop Lamps

Electronic Cruise Control

Key Operated Ignition Switch and Integral Start Position; 4 Position Off/Run/Start/Accessory

Onboard Diagnostics Interface Connector Located Below Dash

Dash Mounted Radio AM/FM Radio with Bluetooth.

(2) Radio Speakers in Cab

Finish

Standard; Components mounted below frame rail shall be coated black I.E. step bumpers, steps, frame extension, pintle hook mount, dock bumper mounts, D-rings, receiver tubes, accessory mounts, light brackets, under-ride protection, etc. Components mounted to underside of body shall be coated black. I.E. Wheel chock holders, mud flap brackets, pad carriers, boxes, lighting brackets, steps, and ladders.

Apply Non-Skid Coating to all walking surfaces

English Safety and Instructional Decals

Vehicle Height Placard - Installed In Cab

Stability test unit according to ANSI requirements.

Cab to be painted Centari #7744-A Lime Yellow

Please include cut sheets and/or equipment brochures with your proposal.