

SPECIFICATIONS FOR WEIGHTS AND MEASURES SCALE TRUCK

SCOPE: The intent of these specifications is to procure a 2016 or 2017 model specialty truck for use by the Tennessee Department of Agriculture (TDA) as a Weights and Measures large scale inspection unit. The existing boom assembly, van body, weight carts, and mass standards will be transferred from an existing 2000/2001 year model Freightliner truck (S7-HR-95) to the new unit. All mass standards and motorized weight cart are to be calibrated by a state government weights and measures laboratory that is fully traceable to the National Institute of Standards and Technology (NIST).

Cab and Chassis specifications;

2016 year model or later conventional cab & chassis

GVW 73,200 lbs set back axle truck

Engine, diesel 450 hp, 1550 lb/ft that meets 2010 EPA and 2013 On Board Diagnostics

Alternator 160 amp quad amount

Batteries (3) three 12 volt Maintenance Free 3375 CCA with Threaded Studs

Clutch, 15-1/2" self adjusting

Compression brake, Jacobs or equal

RH under step horizontal after treatment system with vertical exhaust, cab mounted with no back of cab interference

13'6" exhaust height with turn out and stainless steel tailpipe shield

13 gallon Diesel Exhaust Fluid tank, filled at delivery

Fuel filter/fuel water separator with water-in-fuel indicator

Coolant filter engine mounted

Full flow oil filter

Radiator minimum 1500 sq in

Antifreeze to -34 degrees

Gate blue stripe hoses with constant tension clamps

Block Heater, 1500 watt, 115 volt with plug under LH door

Starter, HD 12 volt with OCP

Transmission, Eaton Ultra shift Plus 10-speed (F0631C or equivalent) with PTO provisions installed by manufacturer at bottom of transmission

Transmission oil Cooler

Synthetic Transmission lube

Front axle, 20,000 lb. capacity with oil seals

Front brakes, 16.5 x 6 cam with slack adjusters and dust shields

Power Steering with auxiliary gear, 4-quart reservoir and oil/air cooler

Front suspension, 20,000 lb flat leaf with shocks

Synthetic Lube

Rear Axle, 40,000 lb tandem, 4.11 axle ratio, with oil seals

Rear Brakes, 16.5 x 7 cam with slack adjusters and dust shields

Drive lines, HD 18N series with 17T interaxle or equal

Parking brake chambers on both rear axles

Synthetic lube

Extra heavy duty air ride suspension, 40,000 lb. capacity

Dual air suspension leveling valves

Ignition controlled electric dump switch for air suspension

Rear air suspension dump valve auto fill with ignition off or >5 mph and with buzzer and indicator light

Transverse control rods and rear shocks on two axles

Pusher axle, Hendrickson 13,200 lb air lift steerable axle, with oil seals

Brakes 15x4 cam with slack adjusters and parking chambers

Dash mounted valve and gauge for lift axle and chassis mounted regulator

Reverse lift axle with last state retention with ignition off

Axle spacing 54"

Air Brakes with ABS

Heated air dryer, frame mounted

Pull cable on all air reservoirs

Wheelbase required to meet Federal Bridge Law and Cab and Axle to accommodate 24' body

Double channel frame to be reinforced, minimum RBM 3,200,000 lbf-in

Chrome steel bumper, 14"

Front tow hooks

Fuel Tank, 100 gal capacity aluminum

Tires, front 425/6SR22.5, 20 ply Michelin XZY-3 or equal

Tires, rear 11R22.5, 14 ply Michelin XDA-3 or equal

Tires Pusher 275/80R22.5, 16 ply

Wheels, front 22.5x12.25 polished aluminum disc

Wheels, rear and pusher 22.5x8.25 polished aluminum

Air cab mounts

Non removable bug screen mounted behind grill

Front fender extensions

LH and RH exterior grab handles

Dual 24 in. air horns, roof mounted with shields

LED marker lights

Integral stop/tail/backup lights

Driver & Passenger Side Mirrors - Dual west coast bright finish heated mirrors with 8" convex spot mirrors remote controlled from driver location

Tinted windshield, rear window and door glass

Vinyl interior, gray

Dash mounted ash tray and lighter may be deleted or used as 12V auxiliary outlet

Storage console on back wall

(2) cup holders

Heater, defroster and air conditioner with recirculation switch and filter

12 volt power supply in dash

High back air suspension driver's seat with lumbar adjustment

High back air suspension passenger's seat with lumbar adjustment

Adjustable tilt and telescoping steering column

Interior sun visors LH & RH

Low air pressure light and buzzer

Primary and secondary air pressure gauges

Air restriction indicator intake mounted

Back up alarm, automatic self-adjusting 87 to 112 DB

Cruise control switch

Gauges include odometer/trip/hour/voltage/diagnostic/fuel/coolant temp/transmission oil temp/ oil pressure/

Radio, AM/FM/WB with front auxiliary input with two radio speakers

(1) One dash mounted PTO switch with indicator light, park brake interlock

Speedometer and tachometer

One on/off rocker switch in dash with indicator light wired to junction block on frame with marker light
Circuit

Pre-trip System Test

Remote engine diagnostics

Windshield wipers with delay

Upgraded Chassis and bulkhead trailer connections

Paint, cab (White and chassis Black)

Vehicle to be clean inside and out with all applicable stickers removed. Protective coverings and plastic to be removed from seats.

Minimum of 1/4 tank of fuel (by fuel gauge) upon delivery

Successful bidder to supply three (3) sets of ignition keys and three (3) sets of other component keys per unit

Mileage, odometer reading

The maximum mileage allowable for any vehicle to be considered acceptable will be 600 miles. It will be the responsibility of the successful bidder to make required arrangements to insure that the mileage reading does not exceed the maximum miles listed when vehicle is delivered to using agency for final acceptance.

Warranty: Mfg standard 1year 100,000 miles basic and 2 year 100,000 miles on power train

Warranty: will begin on date vehicle is placed in service not to exceed six (6) months from delivery date. Mileage warranty will begin at this mileage and the full manufacturer warranty will be added to the delivery mileage. i.e. 100,000 mile warranty plus 600 miles delivery miles equal 100,600 miles of warranty.

Any damage to the vehicle, cab/chassis, or any component provided by the vendor caused while building /transferring existing body to the test unit body or during delivery of the complete test unit shall be the responsibility of the vendor. Damage to the cab / chassis which voids the cab / chassis warranty and which is determined to have been caused by disregard of the cab/chassis manufacturer's specification by the vendor, shall be the responsibility of the vendor.

Invoicing of vehicles & equipment

Invoice to include ignition and all other key numbers.

After receipt of a purchase order, the vendor will be required to supply an invoice to ordering agency when the unit specified is being delivered. Failure to supply an invoice may result in the unit being returned to the vendor until an invoice can be supplied.

The successful bidder shall supply the "mso" (manufacturers statement of origin) and an odometer statement with each applicable unit at the time of delivery. Back of mso must be completed as follows: motor vehicle management,. 6500 centennial blvd. Nashville, tn 37243-0543

Delivery - all deliveries are to be made between the hours of 8:00 a.m. and 3:00 p.m. Monday through Friday. Vendor should note the delivery address on the purchase order as most units no longer ship to the motor vehicle management office location.

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LOGISTICS: Transportation of S7-HR95 will be provided by the vendor from Ellington Agricultural Center (EAC), 430 Hogan Road, Nashville, TN 37220 or an alternate location in Tennessee chosen by TDA to the site where the boom, van body, and mass standards will be installed on the new unit. A minimum of forty eight hours (48) notice shall be given to TDA prior to the unit being transported to the vendor with the unit being picked up Monday-Friday (no weekends or holidays). Proof of insurance and responsibility shall be furnished by the vendor based on TN Motor Vehicle Management (MVM) requirements. The unit shall be transported no later than ten (10) calendar days following receipt of the purchase order unless otherwise specified by TDA or MVM. All work shall be completed and the new unit shall be delivered to TDA/MVM within thirty-five (35) calendar days from the date that S7-HR95 was transported to the vendor unless the vendor discovers major mechanical problems with the boom assembly, van body, weight cart, or mass standards that were unable to be detected until repairs began. It shall be TDA's right to schedule the transportation of this vehicle to the vendor so as not to interfere with the mandated inspections conducted by TDA.

Pre-delivery according to manufacturer's standard requirements.

Acceptance - delivery does not mean acceptance. All vehicles are subject to inspection to establish conformity to specifications prior to acceptance.

QUALIFICATIONS: The vendor may subcontract the work of transferring the boom assembly, van body, weight carts, and mass standards from S7-HR95 to the new unit however this work may only be conducted by a company actively involved in this type of work. A summary of previous related work and qualifications may be requested when to ascertain credentials.

ON SITE VISIT: S7-HR95 test unit, mass standards, and weight carts will be made available for inspection by potential vendors at TDA or an alternate location in Tennessee chosen by TDA. A request to inspect this unit must be made a minimum of five (5) days in advance by contacting Bob Williams, Weights and Measures Administrator, or his designee, at 615-837-5109. Inspections may be scheduled between the hours of 10:00 am – 3:00 pm local time, Tuesday-Thursday.

BOOM ASSEMBLY, VAN BODY, WEIGHT CARTS, AND MASS STANDARDS DETAILED SPECIFICATIONS:

Calibrated Motorized Weight Cart

Weight cart shall be checked for all fluid leaks and repaired as necessary;
Hydraulic oil, motor oil, and other fluids shall be flushed and replaced with oil/fluid specified for the unit;
Battery, muffler, and all filters shall be replaced;
Motor on weight cart shall be “tuned-up” and replace parts as necessary;
Weight cart and correction weights shall be transported by the vendor to a state government weights and measures laboratory fully traceable to NIST and calibrated with two (2) sets of calibration certificates being provided;
The weight cart shall be thoroughly cleaned and repainted prior to calibration with the new paint matching the existing paint color and quality;
All decals and labeling of the weight cart shall be replaced;
Following the completion of the work noted above, the weight cart shall be fully compliant with NIST Handbook 105-8.

NON-CALIBRATED MOTORIZED WEIGHT CART

Cart shall be checked for all fluid leaks and repaired as necessary;
All existing fluids shall be flushed and replaced with those specified for the unit;
All filters shall be replaced with those specified for the unit;
Motor shall be “tuned up” and replace parts as necessary;
Cart shall be cleaned and painted with the new paint matching the existing paint color and quality.

MASS STANDARDS CALIBRATION

The following mass standards shall be cleaned to remove dirt/rust and painted with aluminum paint: 12-1000 lb weights, 15-500 lb weights, and 20-50 lb weights. The standards in the small weight kit shall also be cleaned but not painted;
All mass standards noted above shall be transported by the vendor to a state government weights and measures laboratory fully traceable to NIST and calibrated to NIST Handbook 105-1 specifications and tolerances. Two (2) sets of calibration certificates shall be provided.

BOOM ASSEMBLY/VAN BODY

The existing boom assembly/van body is to be transferred from S7-HR95 existing unit to a new cab/chassis with those detailed specifications located elsewhere in this document;
The following items/equipment shall be examined and repaired/replaced as necessary: swing arm bushings, lifting chain/pocket wheel assembly, trolley drive chain, trolley wheels/idlers, energy chain, wire operated boom control/cable, drive assembly carrier bearings, sequential arms/control system, hydraulic motor/brake system, internal/external lighting;
The frame mounting bolts shall be replaced and torqued along with the oak slats between the frame and body being replaced;
The interior and exterior of the van body shall be cleaned with the exposed frame under the van body being cleaned and painted;
Replace and install full length bumper pads on the rear of the van body for cart contact and cart stop rubber bumpers at the rear of the unit;
Replace all weather seals around all doors and conduct a pressurized test for leaks;
The hydraulic system shall be checked for leaks and repaired as necessary with the hydraulic oil being flushed and replaced with hydraulic oil specified for the system;
All hydraulic system filters shall be replaced with those specified for the system;
All caution and safety decals/labels shall be replaced;
Any mechanical or safety problems with the weights, boom assembly, van body, weight carts, or mass standards not specified above shall be noted in writing and communicated to TDA and MVM as soon as possible for a timely resolution.

Acceptable Brands and Models

Cab and Chassis

2016 Freightliner 114SD

2016 International Workstar 7600

Or Equal