

**COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF GENERAL SERVICES  
DIVISION OF PURCHASING AND SUPPLY  
SPECIFICATIONS FOR 46,000 GVW CAB-CHASSIS**

**PURPOSE:**

The purpose of this specification is to establish a purchase requirement a three axle conventional cab 46,000 lbs. GVW cab-chassis for use by the Virginia Department of Forestry, Agencies, and other Public Bodies of the Commonwealth of Virginia. Vehicle in this specification will be used for emergency wildfire response purposes, to transport fire fighting heavy equipment.

**SCOPE:**

The specifications below describe the general requirements for **one (1)** new tandem rear axle cab-chassis. The vehicle supplied must comply with all U. S. Department of Transportation, National Highway Traffic Safety Administration, Bureau of Motor Carrier Safety, Federal Motor Vehicle Safety Standards, EPA emissions regulations, and State of Virginia rules and regulations in effect at the time of purchase.

The vehicle will be equipped with emergency lights and siren, which will be provided and installed by the Department of Forestry.

**BIDDER REQUIREMENTS:**

The vehicle offered in answer to this request for bid must be a new and unused current production model of the equipment required. No prototype, or demonstrator, or rebuilt product will be accepted, and offering of such a product will be cause for bid rejection. All components, unless otherwise required by these specifications, shall be the standard or optional equipment specifically advertised and installed by the manufacturer.

The vehicle bid shall include all factory standard equipment for the model offered, in addition to optional equipment required per specifications. Where any of the requirements in the specifications exceed the factory standard equipment, the bidder shall provide the appropriate optional equipment.

Bidder must provide with bid a completed specifications form with information of cab chassis offered filled in at the appropriate places in the specifications form. Bidders may use the lines in the right column across from specifications to provide clarifying information for specific items. A blank line in the right column indicates bidder compliance with the specification item. All blank lines in the specifications text requiring information must be filled out with appropriate data. Bidders/Vendors shall indicate any deviations with appropriate reasons and documentation. The Commonwealth reserves the right to obtain technical data and to request clarification when deemed necessary.

**Failure on the part of the bidder/Vendor to provide all requested documentation may be cause to reject the bid/request as non-responsive.**

**The Commonwealth of Virginia, in its sole discretion, may choose to accept or reject any deviation(s) from the specifications.**

Deliver the vehicle to Virginia Department of Forestry, , Attention: Mr. Daniel Fortune  
Bidders shall provide delivery for vehicle offered, FOB destination. Deliver to Virginia Department of Forestry, 492 George Dean Drive, Charlottesville, VA 22903, between 8:30 AM and 4:30 PM Monday thru Friday. Contact Mr. Daniel Fortune at (434) 293-8574 (Office) or (434) 882-0894 (cell) not less than 48 hours prior to delivery. Provide your best delivery lead time after receipt of order (ARO), in the "DELIVERY TIME...." section provided at the end of the specifications.

Products provided must include warranty to provide the best practical no-cost protection to the Commonwealth for correction or replacement as needed for defects in manufacturing, assembly, or parts, to cover truck and all included equipment. Provide documentation of your best manufacturer chassis warranty as well as separate component warranty protection in the "WARRANTY" section at the end of the specifications. Warranty must commence when the vehicle is put in service as evidenced by purchaser's records, rather than commencing on date of delivery.

No Federal tax is to be included with the bid, including tires. Tax exemption registration number will be furnished.

**Specifications Data**

**Clarifying Information**

**BASIC CHASSIS INFORMATION:**

Vehicle Configuration: Cab-chassis, Conventional Cab, 6x4,  
Chassis Manufacturer and Model: \_\_\_\_\_

Gross Vehicle Weight Rating: 46,000 pounds GVWR  
Front axle configuration: 12,000 pounds GAWR, non-driving  
Rear axle configuration: 34,000 pounds GAWR, tandem  
Back of cab to center of rear axle: 156 inches effective CA/CT  
Chassis wheelbase: 220 inches WB, or as needed for 156" CA

**FRAME:**

Frame shall be high strength steel, 100,000 psi minimum, reinforced full length as required for minimum 15.9 cu.in. section modulus:

- Frame rear AF dimension to be minimum 90 inches
- Frame length back of cab to end of frame shall be a minimum of 246 inches.
- Frame channels are to be full depth for full length.
- Frame rails must be clean outside from back of cab to front of first rear spring hanger, free from chassis equipment such as tanks, etc. Batteries are preferred to be mounted under cab, but may be frame mounted if needed.

Provide (2) front tow hooks or eyes, frame mounted, one attached at front of each frame rail.

- Tow hooks and fastening method must be capable of withstanding extraction of full GVW vehicle from soft mud entrapment.

**ENGINE, TRANSMISSION, AND DRIVE LINE:**

Provide 6 cylinder turbocharged diesel engine, minimum 300 SAE gross HP at rated RPM, 860 lbs-ft torque minimum at rated RPM, 49 State EPA emissions compliant, minimum 400 cubic inches displacement.

Specify engine Mfg., Model, HP @ RPM, Max Torque @ RPM:

Provide and install Jacobs, Pac-Brake, or equivalent exhaust

brake to provide engine retarding, with control on dash. Retarder must be interconnected with transmission controls to modify downshift schedule when exhaust brake is activated. Retarder must be effective in reducing truck forward speed on down slopes at full GWR when energized.

Dry air cleaner with air cleaner restriction gauge, dash mounted  
Magnetic engine oil drain plug  
Automatic activated fan drive  
Factory oil filter and spin-on fuel filter  
120 Volt engine block heater, approximately 1000 watts  
Heated fuel/water separator, Racor 900-FG or equivalent  
Low oil pressure/high coolant temperature engine warning system with dash light and alarm  
Engine must be electronically road speed governed to provide a minimum road speed of 70 MPH at manufacturer governed engine RPM.

Heavy duty automatic transmission with (6) forward speeds:

- Transmission shall be Allison 3500 EVS
  - Transmission must be rated for engine maximum torque
  - Transmission shall have PTO option, with (2) PTO openings, one each side of transmission.
  - Magnetic drain plug

Radiator with welded or permanently bonded construction, to provide adequate cooling for prolonged engine idling, and full GVW road travel engine operation, at 100°F ambient temperature.

- Coolant anti-freeze to be of long-life type, and provide protection to -20°F or lower
- Coolant hoses shall have constant torque clamps
- Provide Gates Blue Stripe hoses, silicone hoses, or equal

Horizontal exhaust pipe, mounted on right (curb) side of chassis. Horizontal exhaust pipe must be located close to the inside of one frame rail.

- Exhaust must not interfere with installation of a transmission mounted PTO and pump assembly at the PTO opening on left (street) side of the transmission.

Under-cab fuel tank, 50 gallons minimum capacity, step-tank, right (curb) side preferred.

FRONT AXLE AND SUSPENSION:

Provide a 12,000 lbs. GAWR capacity non-driving front axle  
Power steering  
Heavy duty springs  
Shock Absorbers  
12,000 lbs. minimum capacity front suspension  
Provide oil lubricated front wheel seals with sight lens – Stemco

or equivalent.

- Wheel bearings are to have synthetic oil lubricant

REAR AXLE AND SUSPENSION:

34,000 pounds GAWR minimum capacity full driving tandem rear axle:

Hendrickson walking beam suspension

Shall be equipped with driver controlled locking differential.

- Driver controlled locking differential must have a highly visible driver warning indicator showing that it is engaged. Indicator must be illuminated when lock is engaged, and must be readily visible to the driver in full daylight conditions.

Rear axle ratio to be matched with final output gear ratio of transmission, to provide a minimum road speed of 70 MPH with 275/70R22.5 rear tires per this specification.

Heavy duty rear springs, with auxiliary helper springs, to support full rear axle GAWR

Oil lubricated wheel seals with sight lens and synthetic oil lubricant – Stemco or equivalent

Rear axle spacers as needed to provide level frame

BRAKES:

Provide dual air brakes system for truck application:

- Must include full 4-channel antilock ABS system, controlling all wheels braking

Front brakes lining area minimum 15”x 5”

Rear brakes lining area minimum 16½” x 7”

Spring actuated, air release parking brakes, rear wheels

Automatic slack adjusters front and rear, all wheels

Dust shields, front and rear

Non-asbestos brake lining material

Air compressor, minimum 12 CFM, with receiver tank(s)

Heated air dryer - must keep outside frame rail clean. Do not mount on outside frame rail behind cab.

Air reservoir must be located to maintain clean outside frame rails.

Manual air system drains, with pull chains and flow deflection toward center of chassis, away from operator

WHEELS AND TIRES:

Front wheels to be (2) hub piloted steel disc, 22.5 x 8.25

Rear wheels to be (8) hub piloted steel disc, 22.5 x 8.25

Front tires- (2) 275/70R22.5 load range J highway tread radial

Rear tires- (8) 275/70R22.5 load range J highway tread radial

(1) Spare 275/70R22.5 tire, mounted on 22.5 x 8.25 steel disc wheel, no spare carrier needed

ELECTRICAL:

12 Volts DC negative ground electrical system

Lighting package to meet FMVSS 108 requirements, and state of Virginia requirements.

Provide and install cab clearance lights

Circuit breaker electrical circuit protection

Provide minimum of (2) group 1231 batteries, or equivalent, for starting, 1,200 CCA minimum at 0 deg., with threaded posts

Batteries shall be installed in a battery box. Preferred box location is under left side of cab, but it may be mounted on frame close to back of cab.

Provide a battery charging / jump starting positive stud or positive and negative studs in an easily accessible location

Provide and install a keyless master disconnect switch system for batteries.

120 amp alternator, minimum

Intermittent windshield wipers, with windshield washer

Solid state turn signals flasher

Solid state electrical back-up alarm, 97Db minimum

Provide sealed connectors at back of cab at frame for body builder electrical connections for tail lights, brake lights, turn signals, marker lights, accessory power, and ground, minimum.

Provide wiring for body builder installation of PTO controls, with ignition switch control.

CAB:

Conventional cab, with tilt hood (COE tilt cab will not be accepted)

All standard cab equipment is to be included. No deletions of standard equipment.

Tinted windshield

Cruise control

Tilt steering wheel

All standard instrumentation, to include an odometer that reads mileage to tenths

Cab access for driver and passenger sides, to include grab handles and steps for safe entrance and exit of cab

Dual west coast retractable mirrors, rectangular minimum 15" x 6" size, stainless steel or non-rusting material, 102" wide

Dual air horns

Standard interior trim, with standard interior color – light

Heater with defroster, heavy duty

Cab air conditioning

Air suspension high back driver seat with lap/shoulder belts

Air suspension high back passenger seat with lap/shoulder belts and arm rests

Standard AM-FM radio

Driver and passenger interior sun visors

Minimum (2) vehicle keys

MISCELLANEOUS:

Provide NFPA compliance kit, as required to meet NFPA



### 46,000 GVW Truck Cab and Chassis

#### DATA SHEET

**Bidder shall furnish the following data as part of this bid:**

IFB # \_\_\_\_\_ Dated: \_\_\_\_\_

Name and Address of Bidder:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Make: \_\_\_\_\_ Model: \_\_\_\_\_

GCW \_\_\_\_\_ GVW \_\_\_\_\_

Wheelbase: \_\_\_\_\_ CA: \_\_\_\_\_ CE: \_\_\_\_\_

Unit Weight: Front Axle \_\_\_\_\_ Rear Axle \_\_\_\_\_ Total \_\_\_\_\_

Frame Size: \_\_\_\_\_ Section Modulus: \_\_\_\_\_

RBM: \_\_\_\_\_

Reinforcement Locations and Type:

\_\_\_\_\_

Engine Make: \_\_\_\_\_ Model: \_\_\_\_\_ Cylinders. \_\_\_\_\_

Displacement: \_\_\_\_\_ Net HP \_\_\_\_\_ at \_\_\_\_\_ RPM

Net Torque \_\_\_\_\_ at \_\_\_\_\_ RPM:

Radiator Capacity (qts.): \_\_\_\_\_

Front Axle Make: \_\_\_\_\_ Model: \_\_\_\_\_

Load Rating: \_\_\_\_\_

Rear Axle Make: \_\_\_\_\_ Model: \_\_\_\_\_

Load Rating: \_\_\_\_\_

Differential Ratio: \_\_\_\_\_

Road Speed @ Rated RPM: \_\_\_\_\_

Gradability, concrete surface: \_\_\_\_\_

Size Front Brake Shoes: \_\_\_\_\_

Size Rear Brake Shoes: \_\_\_\_\_

Battery Make: \_\_\_\_\_ No. of batteries \_\_\_\_\_ Group \_\_\_\_\_ Volts: \_\_\_\_\_

CCA @ 0 degrees: \_\_\_\_\_

Are Shock Absorbers Furnished? \_\_\_\_\_

Front Springs Capacity @ Ground: \_\_\_\_\_

Rear Springs Capacity @ Ground: \_\_\_\_\_

Auxiliary springs Capacity, Lbs: \_\_\_\_\_ (each)

Transmission Make: \_\_\_\_\_

Transmission Model: \_\_\_\_\_

Tire Make: \_\_\_\_\_ Size: \_\_\_\_\_

Ply Rating: \_\_\_\_\_

Wheel Make: \_\_\_\_\_ Type: \_\_\_\_\_

Rim Size: \_\_\_\_\_

**REMARKS**

---

---

---

---

---

---

---

---

---

---