

ALLEGAN COUNTY ROAD COMMISSION

SPECIFICATIONS FOR TANDEM AXLE DUMP TRUCK

The following is a list of Minimum Acceptable Requirements for trucks that are to be bid under this proposal. All blank spaces listing options or dimensions are to be filled in. If it is impossible to provide certain items that are required list all exceptions and options below. All bids are to include delivery of units to the Road Commission.

Truck GVWR Minimum 64,000 lbs. Truck GVWR is \_\_\_\_\_

1. Engine – (Shall be 2019 emissions compliant, Detroit or Cummins) 450 HP, 1650 lb-ft torque minimum.

Engine Bid Make \_\_\_\_\_, Model \_\_\_\_\_ HP \_\_\_\_\_

Torque \_\_\_\_\_, @ \_\_\_\_\_ RPM

2. Engine Requirements-

- (a) Automatic shutdown for low oil pressure and coolant
- (b) Replaceable filters
- (c) Front crankshaft adapter for P.T.O. – “Spicer” Flange #2-2-479
- (d) Engine to be retro-fitted for overhead fuel tank system
- (e) Engine and after treatment system warranty, 7 yr, 250,000 mile, 100% parts and labor
- (f) Engine software cables, adapters and paper manuals
- (g) Mechanic training for updates and changes

NOTE: P.T.O. shaft & pump to be installed by fabricator.

3. Radiator & Grill - Heavy duty radiator to accommodate front mounted P.T.O. pump, shaft, and joint assembly.

NOTE: Hole in radiator and grill is unacceptable.

4. Allison Automatic Transmission

- (a) 6-speed model 4500 RDS with synthetic Allison fluid
- (b) Push button shift control
- (c) Low oil level sensor
- (d) 5-yr, 200,000 mile extended warranty
- (e) Transmission ECU mounted inside the cab (performed by dealer, all factory connections with sealer, no splices)

5. Drive Line – Spicer 1810HD drive line with two-section shaft with center bearing and half round u joints.

6. Rear Axle - Rockwell RT-46-160, driver operated differential lock in both rear axles and magnetic drain plugs. Gear Ratio 5.63 for a road speed not to exceed 60 M.P.H. at 1900 RPM. Startability factor not to be less the 38. Startability factor is \_\_\_\_\_ .

7. Rear Suspension – 46,000 lb Nuway ADZ-246 air ride height control valve, one valve per side shall control both axles, right side linkage shall be adjustable.

8. Front Axle – Meritor, minimum capacity 20,000 lbs. Set back type set at approximately 33 inches in back of grill. (see wheel base dimensions, section 12)
- (a) Vented hub caps

9. Front Springs - Taper-leaf type Yes \_\_\_\_\_ No \_\_\_\_\_ 10,000 lbs. each spring.
- (a) Greaseable shackle pins, minimum diameter - 1 inch.

10. Power Steering - Hydraulic Assisted, TRW gears
- Turning Radius Degree \_\_\_\_\_, outer circumference \_\_\_\_\_ feet

11. Air Brakes - Spring-set parking brake with warning light & buzzer.
- (a) Compressor shall be a Bendix BA-921 or equal.
  - (b) Front Brakes: 16 1/2 X 6" Rockwell TQ, S-Cam with dust shields and Haldex automatic slack adjuster.
  - (c) Rear Brakes: 16 1/2 X 7" Rockwell TQ, S-Cam with dust shields and Haldex automatic slack adjuster.
  - (d) Haldex Gold Seal Brake Chambers.
  - (e) Heated air dryer Wabco spin on type
  - (f) Wabco ABS
12. Frame – RBM = 3,200,000 / Strength = 120,000 PSI minimum
- Single Channel \_\_\_\_\_ Double Channel \_\_\_\_\_
- If Single Channel
- Channel dimensions \_\_\_\_\_ x \_\_\_\_\_
- R.B.M. \_\_\_\_\_ Strength \_\_\_\_\_ Section Modulus \_\_\_\_\_
- If Double Channel Frame
- Main channel dimensions \_\_\_\_\_ x \_\_\_\_\_
- Secondary channel dimensions \_\_\_\_\_ x \_\_\_\_\_
- R.B.M. \_\_\_\_\_ Strength \_\_\_\_\_ Section Modulus \_\_\_\_\_
- Frame to have all seams sealed
- (a) Frame to have one (1) cross member behind rear axle
  - (b) Frame to have two (2) cross members in cab to axle section minimum
  - (c) Frame to have one (1) cross member at rear cab support and one (1) cross member at front of motor.
  - (d) Wheelbase – 211 inches minimum
  - (e) Cab-to-axle - 134 inches minimum
  - (f) Set back front axle
  - (g) AF 65" minimum. (center of drive axles to rear of frame)
  - (h) No holes shall be placed in frame that are not necessary for assembly or attachment.
  - (i) Frame to extend 20" ahead of grill (bolt on frame extensions are NOT acceptable).
  - (l) All frame mounted equipment to have minimum 24" ground clearance.
  - (k) Top of frame shall be straight from front to rear.
13. Shock Absorbers – Six shocks required, two per axle
14. Tires, Hubs, and Wheels –
- (a) Front tires shall be size of 315-80R-22.5
  - (b) Front wheels shall be heavy duty steel ten (10) hole disc hub piloted
  - (c) Dual rear tires shall be size of 12R-22.5
  - (d) Rear wheels shall be heavy duty ten (10) hole disc hub piloted unimount
15. Electrical System \*\* multi-plex wiring outside of cab is not acceptable \*\*
- Multiplex Chassis Yes \_\_\_\_\_ No \_\_\_\_\_
- Multiplex Cab Yes \_\_\_\_\_ No \_\_\_\_\_
- (a) 12 volt, negative ground
  - (b) 160 AMP heavy duty Delco alternator
  - (c) Four (4) batteries minimum 2500 CCA, standard group 31
  - (d) Batteries mounted externally on truck
  - (e) 7 way round trailer plug and wiring to rear cross member
16. Gauges (direct reading type) - (a) Oil pressure (b) Water temperature (c) Ammeter or Voltmeter (d) Air pressure, (e) Dash mounted air filter restriction gauge, (f) Tachometer, (g) Fuel gauge and (h) Engine hour-meter.
17. Warning lights and/or buzzers for safety - (a) for low air pressure, (b) engine overheating, (c) low oil pressure, (d) back-up alarm

18. Truck Cab
  - (a) Steel conventional cab. BBC is \_\_\_\_\_
  - (b) Cab to be corrosion and rust protected between inner and outer walls
  - (c) Air ride cab
  - (d) Key code D610
  - (e) Fiberglass sun visor
  - (f) Rear cab glass to be safety coated
  - (g) Tool box mounted under right step
  
19. Cab Insulation - Complete insulation package to include floor, roof, back wall, firewall and doors.
  
20. Tinted Windshield
  
21. Fenders - Fender-hood combination assembly is desired. If bid, a minimum of 36 inch wide opening must be provided with stationary grill.
  - (a) A tip-ahead, pit-type fender with butterfly hood and stationary grill is optional.
  - (b) Fiberglass fenders
  
22. Exhaust System
  - (a) Vertical after treatment system with vertical tailpipe mounted behind right rear corner of cab.
  
23. Cab- Air conditioning, heater with shut off valve, cruise control, power windows, tilt wheel, Radio: AM/FM/CD/USB with blue tooth connect, spotlight on left side, heated west coast type mirrors with double brackets, heated spot mirrors, 12-V power point, marker lights, four extra ignition controlled switches, snowplow headlight prep package, air ride cab, grab handles both sides, left side roof mounted dual air horns, engine fan override switch, electric intermittent wipers, stainless cab skirts and single cup holder.  
  
 Left side air cleaner YES \_\_\_\_\_ NO \_\_\_\_\_, must be capable of drawing inside or outside air.
  
24. Front Bumper - Not required
  
25. Driver's Seat - National 2000, Cloth Mid Back Air Suspension with arm rests
  
26. Passenger Seat - Standard cloth seat, tool box under seat.
  
29. Fuel Tank - Non-returnable temporary tank for transporting truck only.  
 NOTE: Do not drill frame - band tank to frame
  
30. Paint Color - Red, Paint top of truck hood flat black
  
31. Air Tank and Exhaust Pipe - to be mounted no lower than bottom of frame (24" minimum ground clearance)
  
32. Parts Books, Parts CD Rom, and shop repair manuals must be furnished before final payment is made.
  
33. Bidders - Order to manufacturer to be checked and signed by Allegan County Road Commission before final construction order is submitted.

EXCEPTIONS:

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OPTIONS:

Tire size noted above, make options to be listed here, either Good Year G289 and G622 or Michelin XZUS and XND

Factory labels on extra dash switches: front strobes, rear strobes, blade light, spreader light

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Necessary Dimensions To Be Provided by Bidder

1. Distance between seats \_\_\_\_\_ inches
2. Length of hood ahead of "doghouse" or fire wall \_\_\_\_\_ inches
3. Length and width of "doghouse" in cab \_\_\_\_\_ inches \_\_\_\_\_ inches
4. Distance from back of cab to drive wheel base \_\_\_\_\_ inches
5. Distance of DEF tank from drive wheel base \_\_\_\_\_ inches
6. Distance from frame bottom to ground \_\_\_\_\_ inches

**WARRANTY**

<u>Component</u> <u>Years</u>	<u>Parts &amp; Labor Coverage</u>	<u>Miles</u>		
ENGINE	100% Parts & Labor	250,000		7
ALLISON TRANSMISSION	100% Parts & Labor	200,000	OR	5
TOTAL VEHICLE	_____	_____		_____
DRIVETRAIN	_____	_____		_____
FRAME	_____	_____		_____
CAB CORROSION	_____	_____		_____
CAB STRUCTURE	_____	_____		_____
RADIATOR & COOLING SYSTEM	_____	_____		_____
EXHAUST & AFTERTREATMENT SYSTEMS	_____	_____		_____

\*The Allegan County Road Commission reserves the right to request any specification or component measurements\*

\*The Allegan County Road Commission reserves the right to request any specification reviews with the county, manufacturer and finishing fabricators\*