

ALLEGAN COUNTY ROAD COMMISSION

SPECIFICATIONS FOR TANDEM AXLE SEMI TRACTOR

All bids are to include delivery of the unit to the Road Commission.

The following is a list of Minimum Acceptable Spec 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.

1. Truck GVWR Minimum 120,000 lbs.
2. Engine – 2021 emissions compliant, Detroit DD16
3. Engine Requirements-
 - (a) Automatic shutdown for low oil pressure and coolant
 - (b) Replaceable filters
 - (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

4. Radiator & Grill - Heavy duty radiator

NOTE: Hole in radiator and grill is unacceptable.

5. Fuller Manual Transmission

- (a) 13 speed
- (b) Heavy duty double disc clutch
- (c) 1850-foot pound torque rating
- (d) PTO equipped
- (e) Cast iron clutch housing
- (f) Synthetic oil
- (g) Oil to air cooler

6. Wet Kit

- (a) Rear cab mount
- (b) 2500 psi
- (c) Air operated
- (d) Aluminum tank

7. Drive Line – 1810 heavy duty drive line with two-section shaft with center bearing and half round u joints.

8. Rear Axle - Rockwell RT-46-160, driver operated differential lock in both rear axles and magnetic drain plugs.

9. Rear Suspension – Nuway ADZ-246

- (a) Air ride height control valve
- (b) Adjustable linkage
- (c) Manual dump valve in cab

10. Front Axle – Meritor, minimum capacity 20,000 lbs. Set back type set at approximately 33 inches in back of grill.

- (a) Vented hub caps

11. Front Springs - Taper-leaf type 10,000 lbs. each spring.

- (a) Greaseable shackle pins, minimum diameter - 1 inch.

12. Power Steering - Hydraulic Assisted, TRW gears

13. Fifth Wheel – Holland Hitch
 - (a) air slide, 24 inch

14. Air Brakes - Spring-set parking brake with warning light & buzzer.
 - (a) Compressor shall be a Bendix BA-921 or equal.
 - (b) All brakes equipped with dust shields
 - (c) Haldex automatic slack adjusters.
 - (d) Haldex Gold Seal Brake Chambers.
 - (e) Heated air dryer Wabco spin on type
 - (f) Wabco ABS
 - (g) Trailer air lines

15. Frame
 - (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) Set back front axle
 - (e) Front bumper
 - (f) No holes shall be placed in frame that are not necessary for assembly or attachment.
 - (g) Frame to have all seams sealed
 - (h) Frame to be undercoated.
 - (i) Top of frame shall be straight from front to rear.

16. Shock Absorbers – Six shocks required, two per axle

17. 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

18. Electrical System ** multi-plex wiring outside of cab is not acceptable **
 - (a) 12 volt, negative ground
 - (b) 160 AMP heavy duty Delco alternator
 - (c) Delco starter
 - (c) Four (4) batteries minimum 2500 CCA, standard group 31
 - (d) Batteries mounted externally on truck
 - (e) Primary and supplemental 7 way round trailer plugs and wiring
 - (f) Twist tube harness coverings where applicable

19. Gauges (direct reading type) - (a) Oil pressure (b) Water temperature (c) Ampmeter or Voltmeter (d) Air pressure, (e) Dash mounted air filter restriction gauge, (f) Tachometer, (g) Fuel gauge and (h) Engine hour-meter.

20. Warning lights and/or buzzers for safety - (a) for low air pressure, (b) engine overheating, (c) low oil pressure, (d) back-up alarm

21. Truck Cab
 - (a) Steel conventional 123 BBC cab.
 - (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
 - (h) Exterior grab handles

22. Cab Insulation - Complete insulation package to include floor, roof, back wall, firewall and doors.

23. Tinted Windshield

24. Exhaust System
 - (a) Vertical tailpipe mounted behind right rear side of cab.
 - (b) After treatment control valve mounted inside the cab (performed by dealer, all factory connections with sealer, no splices)
25. 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 air switches, 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.
26. Driver's Seat - National 2000, Cloth Mid Back Air Suspension with arm rests
27. Passenger Seat - Standard cloth seat, tool box under seat.
28. Fuel Tank – 80 gallon fuel tanks
29. DEF Tank – 13 gallon
30. Paint Color - Red, Paint top of truck hood flat black
31. Parts Books - Parts CD Rom, and shop repair manuals must be furnished before final payment is made.
32. Bidders - Order to manufacturer to be checked and signed by Allegan County Road Commission before final construction order is submitted.

The following is a list of Build Options and Ratios necessary for trucks to meet above spec. 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.

1. Truck GVWR is _____
2. Engine - Torque _____, @ _____ RPM
3. Transmission – Torque rating _____
4. Wet Kit – make and model _____
5. Rear Axle – Gear ratio _____, Max road speed of _____ MPH
6. Rear Suspension - _____ Lb. Rating
7. Steer brakes – Make _____ Type _____ Size _____
8. Drive Brakes – Make _____ Type _____ Size _____
9. Frame – 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 _____
- Wheel base _____

EXCEPTIONS:

OPTIONS:

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

WARRANTY

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

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