

Attachment B

Digger Derrick Specifications

Specification No. 868-DDTM-50TD/HYD76-1032/141

50,000 GVWR Hydraulic Derrick - Tandem Truck Mounted

Hydraulic derrick, tandem truck mounted, new and of current model, equipped as advertised by the manufacturer, to meet or exceed the following **MINIMUM** specifications:

Truck Proposed: **Make:** _____ **Model:** _____

Derrick Proposed: **Make:** _____ **Model:** _____

Service Body Proposed: **Make:** _____ **Model:** _____

Non-Restrictive
Clause:

Any use of brand name or equal within this specification is to be considered a reference for the purpose of describing the standard of quality, performance, and characteristics desired. It is not intended to limit or restrict competition

SPECIFICATIONS

Truck Specifications:

GVWR: 50,000 lbs. minimum

GVWR: _____

Comply Yes/No: _____

Cab to Tandem: 102"

Cab to Tandem: _____

Comply Yes/No: _____

Wheelbase: 154"

Wheelbase: _____

Comply Yes/No: _____

Engine: 13-liter, 470-horsepower, water-cooled diesel, 1,650 ft-lbs torque, to meet current federal and EPA emission requirements

Make: _____ Model: _____

HP: _____ Torque: _____

Comply Yes/No: _____

Engine Protection: Unit shall have automatic shutdown system to include; oil pressure, oil temperature, coolant temperature, and intake manifold temperature.

Comply Yes/No: _____

Transmission: Heavy Duty, Fully Automatic, 6-speed minimum or Automated-Manual, 13-speed minimum, geared for highway speeds up to 80 MPH with fully loaded truck

Comply Yes/No: _____

Brakes: Full air, disc, ABS with 6S/6M configuration for front and rear axle compatibility, sized to meet all applicable state and federal safety standards for size, weight and application of truck

Brake System specified: _____ Rotor Size: _____ Caliper size: _____

No. of Caliper Pistons: _____ Capacity of air tank: _____

Air Compressor Size (GPM): _____ ABS system: _____

ABS Configuration used: _____

Comply Yes/No: _____

Axle Rating and

Suspension: Front – 16,000 lb. minimum capacity, multi-leaf springs w/shock absorbers, disc brake compatible hubs

Rear – 34,000 lb. minimum capacity, multi-leaf springs, differential lock and full locking wheel differential (anti-spin device), disc brake compatible hubs

Axle rating:

Front: _____ Rear: _____

Axle description:

Front: _____ Rear: _____

Gear ratio: _____

Comply Yes/No: _____

Cooling

System: Heavy-duty, high capacity radiator, silicone hoses

Comply Yes/No: _____

Electrical: 12-volt, 160-amp alternator. Three 12-volt maintenance free batteries, 1875 CCA

Alternator:

a. Manufacturer: _____

b. Amp rating: _____

Battery size and capacity: _____

Comply Yes/No: _____

Frame: All grade 8 bolts and hardware for assembly. Huck bolts will not be acceptable. High strength, low alloy steel section modulus – 15.9", minimum 110,000 psi

Comply Yes/No: _____

Fuel System: 100-gallon (minimum) tank capacity (any configuration) dual stage fuel filters

Number of tanks: _____

Capacity per tank: _____

Comply Yes/No: _____

DEF Tank: 13-gallon frame-mounted, minimum

Comply Yes/No: _____

Steering: Power - integral

Comply Yes/No: _____

Driveline: Heavy-duty main u-joint with inter-axle

Comply Yes/No: _____

Tires, Radial: Front – (2) 12R22.5, Load Range L, 20-ply radial, highway tread, steer tire pattern
Rear – (8) 11R22.5 load range H, 16-ply radial, on-off highway tread, hi-miler extra grip, mud and snow
Must be rated equal to or higher than axle and suspension weight specifications and rated for top governed speed of 80 MPH

Comply Yes/No: _____

Wheels: Front – (2) 22.5 x 9, 10 hole disc, steel, hub-piloted
Rear – (8) 22.5 x 8.25, 10 hole disc, steel, hub-piloted
Must be rated equal to or higher than axle and suspension weight specifications and rated for top governed speed of 80 MPH, disc brake compatible

Comply Yes/No: _____

Back-up

Alarm: Smart alarm system which is activated upon movement of the vehicle; audible above normal outdoor and construction sounds

Comply Yes/No: _____

Cab and

Equipment: Conventional-type, steel construction with fiberglass front hood and fender assembly, tilting hood and fender assembly, equipped with door pads and back of cab pads for sound deadening and insulation.

All standard equipment including, but not limited to: five cab-mounted marker lights, deluxe high-back air suspended driver seat and passenger seat, factory air conditioning and heater with defroster, outside assist handles both sides (if exhaust is in the way then an inside assist handle will be acceptable for the side affected), 12-volt accessory power outlet – dash mounted, all dash switches including spares shall be functional, direct reading gauges for oil pressure, water temperature and air pressure, tachometer, AM/FM Bluetooth stereo radio with hands-free option, dual air horns, warning lights and buzzers for air pressure, oil pressure and water temperature, RH and LH west coast mirrors, convex auxiliary mirrors (LH & RH), tinted glass all around, four-speed electric windshield wipers and washers with intermittent mode, tilt steering column, axle air bladder dump valve, front tow hooks, heavy-duty front bumper, tractor package providing electrical and air hookup to trailer with 12 foot lines and cables, hand control valve, breakaway valves, double check valve, circuit breaker for clearance and identification lights, and 7-wire electrical cable, high visibility orange safety belts

Comply Yes/No: _____

Digger/Derrick Specifications:

Basic Derrick: Three (3) stage hydraulically operated derrick, center, rear-mounted

<u>Performances Ranges -- Minimum Capacities:</u>			2nd or 3rd stage
<u>Degree</u>	<u>Boom Retracted</u>	<u>Boom Extended</u>	<u>Boom Fully Extended</u>
80°	20,500 lb	14,600 lb	11,800 lb
45°	8,200 lb	4,800 lb	3,500 lb
0°	4,900 lb	2,600 lb	1,800 lb
-20°	2,800 lb	1,200 lb	750 lb

Comply Yes/No: _____

Elevation: From 80° above horizontal to 20° below horizontal minimum range

Comply Yes/No: _____

Sheave Height: 46' minimum at 80° with full extension, when mounted on 40" chassis

Comply Yes/No: _____

Load Radius: 37' minimum from centerline of rotation at 0° with second and third stage extended

Comply Yes/No: _____

3:1 Structural
Safety Factor: Designed and tested so that the yield point of the structural components is not exceeded when the derrick is loaded to three times its rated capacity

Comply Yes/No: _____

Boom Tip Winch: 15,000 lb bare drum capacity; self—locking, high torque, worm gear winch, equipped with oil cooled brake with special provisions on drum for attaching wire rope, polypropylene rope, or polyester rope

Comply Yes/No: _____

Lift Cylinders: The main boom shall be equipped with single or dual lift cylinders capable of lifting the full rated capacities shown above in "Performances Ranges -- Minimum Capacities" Chart.

Comply Yes/No: _____

Rotation: 360° continuous unrestricted rotation provided by high efficiency worm gear or planetary type drive, equipped with disc brake, driving a hardened shear ball bearing rotation gear, resulting in extra smooth rotation

Comply Yes/No: _____

Pivot Point Pins: All major load bearing pins are plated. all pivot points are line bored or reamed and pins have keepers

Comply Yes/No: _____

Bearings: Lift cylinder equipped with self-aligning bearings. The second stage boom shall utilize slide pads.

Full Hydraulic Control System: The operator's control station is to be fully hydraulic with full pressure/full flow for all boom functions and no electrically operated boom controls. There shall be individual control levers for all boom functions.

A riding seat type control console is to be provided on the curb side of the turret.

Comply Yes/No: _____

Overload Protection Protects derrick from being overloaded. Cuts off winch up, digger dig, second and third stage extensions, importantly it leaves operational those functions which can get you out of trouble. Once the operator has eliminated the overloaded condition, the overload protection system automatically allows all functions to be operational.

Comply Yes/No: _____

Auger Stow Protection Protects against damage to auger and auger mechanism by automatically cutting off auger function when auger is stowed

Rotation Overload Protection: Protects against damage to structure resulting from excessive side loading through the hydraulic overload protection system built into the rotation system.

Comply Yes/No: _____

Digger Transfer Protection: Protects against damage to transfer mechanism when un-stowing digger and auger

Comply Yes/No: _____

Holding Valves: Provided on main derrick cylinders including counter-balanced holding valves on hydraulic extension cylinder and outrigger cylinders

Comply Yes/No: _____

Auger Storage Mechanism: Self-latching auger storage bracket, hydraulic auger release, digger transfer mechanism including automatic auger pick-up device and auger stow protection

Comply Yes/No: _____

Complete Hydraulic System: The unit is equipped with a tandem vane high efficiency, 3000 psi rated hydraulic pump providing 43.5 gallons per minute (at 2,000 rpm and 2,500 psi). 50 gallon hydraulic oil reservoir which includes a 10 micron replaceable cartridge type return line filter mounted in the reservoir with bypass valve to prevent restricted flow. A 100 mesh filter screen in the filler cap and a 40 mesh filter screen in the tank outlet. Glycerin filled pressure gauge to monitor circuit pressures. Relief valves to protect the derrick and digger winch circuits.

Comply Yes/No: _____

Stabilizers: Unit to have front and rear "A" frame type with a minimum of 153" spread at full extension. The stabilizers are to be constructed as part of the main frame or have a sub-frame that is securely fastened to the main frame. The outrigger controls are to be installed at the rear of the body

Comply Yes/No: _____

Two Speed Digger: Equipped with planetary gear drive producing up to 12,000 ft-lb torque:

The digger is to be equipped with a 2-5/8" hex kelly bar and locking dog assembly with kelly bar adapter, locking dog, 2-5/8" kelly bar and 7' drive wrench

Digger auger - 24" diameter auger, 104" long with 60" flighting and steel boring head and 2-5/8" hex kelly bar

Digger auger - 18" diameter auger, 104" long with 60" flighting and steel boring head and 2-5/8" hex kelly bar

Digger auger - 12" diameter auger, 104" long with 60" flighting and steel boring head and 2-5/8" hex kelly bar

Digger auger - 9" diameter auger, 104" long with 60" flighting and steel boring head and 2-5/8" hex kelly bar

Comply Yes/No: _____

Tilt Pole Plumber for Transferable Pole Buddy:

Circular design arms handle poles up to 23" diameter boom pole guide with safety check valve and tilting system shall be attached to flared boom tip and folds back out of the way when not in use. Install double holding valve on pole guide tilt and open/close circuits. The pole plumber is installed on the transferable pole buddy flange assembly and transfers from the second to the third stage booms

Comply Yes/No: _____

Tilt Pole Plumber Interlock for Transferable Pole Plumber:

The tilt pole plumber includes an interlock system which protects both pole plumber and fiberglass third stage boom from accidental damage caused by extending the third stage boom with the pole plumber installed on the second stage boom and in the tilted down position

Comply Yes/No: _____

Two-part line attachment installed on the end of the second stage boom

Comply Yes/No: _____

Third Stage Fiberglass Boom,
Hydraulically Extended:

Structurally capable of lifting to rated hydraulic capacity of derrick in given position while maintaining the derrick's full three to one structural safety factor

Equipped with flared boom tip

Certified for rated line voltage up to and including 46 KV AC

Extension cylinder equipped with holding valves

Comply Yes/No: _____

Third Stage Boom
Extension Rollers:

The boom is to be mounted on tapered slide pads installed at the end of the second section to support the fiberglass boom under load minimizing scratches and abrasions. The sides of the

fiberglass boom are supported and guided by non-metallic rollers to prevent tracking

Comply Yes/No: _____

Boom/Accessories: Engine start/stop switch at both control stations

Hydraulic oil and lubricants, installed

8-1/2' x 1/2" wire rope sling with eye in each end

4' x 1/2" wire rope sling with eye in each end

60' x 1" braided rope with eye in each end

Nylite spool shield and shackle #4 orange

cab control, heavy duty SAE power take-off

two-speed throttle control at the rear of the body

Comply Yes/No: _____

Service Body Specifications:

Service line body, suitable for installing on any tandem dual rear wheel chassis with 102 " CT measurement.

Body - fabricated from hot dipped zinc galvanized steel with 100% iron zinc alloy coating

16 gauge outside panels
18 gauge shelving
16 gauge panels
12 gauge safety tread steel floor (four-way pattern)
structural channel sub—base

Body Dimensions:

138" overall body length
93" overall body width
46" overall body height
18" compartment depth
57" floor width

Compartment — left side:

First vertical 24" wide — six (6) fixed material hooks
Front horizontal 54" wide — one (1) plain adjustable shelf
Rear horizontal 54" wide — one (1) plain adjustable shelf

Compartment — right side:

First vertical 24" wide — access steps to cargo area with two grab handles
Front horizontal 54" wide — two (2) adjustable shelves with
removable dividers on 8" centers
Rear horizontal 54" wide - two (2) adjustable shelves with
removable dividers on 8" centers

Standard features:

Basic body fabricated from hot zinc dipped galvanized steel with 100% iron zinc alloy coating, all welded construction

All doors are full double—paneled, self—sealed with built—in drainage for maximum weather tightness

Standard features (continued):

All doors contain flush type single point locks with recessed handles, including keyed locks and two—stage strikers

Heavy—gauge, welded steel base construction with safety tread floor

All edges either rolled or folded for strength and safety

Door header drip rail at top for maximum weather protection through shelf, full length, 16" wide, extending through all compartments, left side

Neoprene fenders

Wheel chock storage compartments built into the fender wheels

Comply Yes/No: _____

Body Accessories:

Treadplate installed on top of compartments

36" long x 94" wide x 6" deep combination rear platform extension and tamp

Storage compartment with drop down doors built in at each side

132" long hotstick compartment, built in top street side of body, drop down opening door from rear including:

Two (2) hotstick brackets, installed splash aprons, installed lights and reflectors in accordance with FMVSS #108 lighting package

Installation of body:

Paint body one solid color with polyurethane enamel or equal, white

Two grab handles street side of rear platform extension

Cable suspended stirrup step on street side at rear

Rigid type stirrup step installed under the curb side recessed steps at front of body

Two rubber dock bumpers installed on right and left side of frame

ICC rear bumper

Comply Yes/No: _____

Miscellaneous/
Accessories:

6" possum belly with drop down door at the rear and a stop at 120"

Heavy duty pintle hook with frame reinforcement and two safety chain rings

Storage bracket for anchor auger on top of street side compartments

Black undercoating applied to underside of body

Tow hooks, installed at front of chassis

Triangle reflector kit

Five pound fire extinguisher with mounting bracket mounted front street side of the body

DOT inspection

7-prong trailer plug installed at the rear

Comply Yes/No: _____

Paint: Manufacturer's Standard White

Comply Yes/No: _____

ADDITIONAL REQUIREMENTS

Service: Unit shall be delivered fully assembled ready to operate. Factory-trained dealer representative is to inspect equipment on delivery and provide receiving MDOT equipment manager with information on operational, service, and maintenance requirements.

Acknowledge Yes/No: _____

Warranty: Clearly stated terms and conditions of all manufacturer warranties shall be included with the Statement of Qualifications (SOQ). Any and all materials, specialty equipment, or accessories that prove defective in normal operation within the warranty period shall be replaced or repaired by the manufacturer free of any and all cost to MDOT, including all material, labor, and transportation costs. Warranty replacement and/or repairs shall be furnished promptly by the successful bidder within a time period not to exceed thirty days. **The bidder shall provide written assurance with the SOQ regarding warranty repairs.**

The delivering dealer will have sole warranty responsibility (**all components**) for the first ninety days after acceptance of vehicle.

The manufacturer shall provide, with SOQ, a list of warranty service locations within the State of Mississippi for all components of the vehicle (A/C, body, chassis, electrical, etc.) which may need warranty repair beyond the first ninety days.

Acknowledge Yes/No: _____

Workmanship: Workmanship throughout the vehicle shall conform to the highest standard of commercially accepted practice for the class of work and shall result in a neat and finished appearance. The design of the body and equipment which the manufacturer proposes to furnish must provide a vehicle of substantial and durable construction in all respects.

All parts shall be new. Used, reconditioned, or obsolete parts will not be accepted.

Acknowledge Yes/No: _____

Parts Availability: Dealer name and location within the State of Mississippi (if applicable):

Acknowledge Yes/No: _____

Tests and Testing: The complete vehicle and all working and moving parts and operating devices shall be thoroughly tested and put in operating condition by the manufacturer.

Prior to acceptance of vehicle by MDOT, the manufacturer shall service and adjust vehicle for operation.

Acknowledge Yes/No: _____

Literature: Technical manuals: Operator's manual, service/maintenance manual, and parts book are to be made available in both hard copy and electronic (cd, flash drive, etc.) versions. One set of technical manuals shall be provided with each unit upon delivery. Additional manuals may be ordered at a later date.

Technical service bulletins: Successful bidder shall provide TSBs (technical service bulletins) for all equipment delivered to MDOT as they are published, regardless of the date of delivery. TSBs may be furnished in paper or electronic format, and shall be updated regularly.

The following additional information shall be provided by the vendor at time of delivery (electronically if possible):

Manufacturer's recommended service/preventive maintenance intervals
Recommended fluids, lubricants, and their SAE equivalents

Acknowledge Yes/No: _____

Certification: The manufacturer(s) shall furnish certification that this machine meets or surpasses current U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Regulations, U.S. Department of Transportation Federal Motor Vehicle Safety Standards (FMVSS), and any other applicable Federal regulations.

Descriptive literature shall be furnished to substantiate the details specified in SOQ.

Acknowledge Yes/No: _____

=====

NOTE: Any company manufacturing, up-fitting, and/or selling a finished motor vehicle in the State of Mississippi must be in compliance with the rules and regulations of the Mississippi Motor Vehicle Commission prior to the bid opening. Any licensing will be verified prior to award.

A copy of licenses as required by the Mississippi Motor Vehicle Commission may be supplied with SOQ.

Dealers License Number: _____

Manufacturers License Number (where applicable): _____

Application and contact information may be attained through the internet at
<http://www.mmvc.ms.gov/>

Acknowledge Yes/No: _____

=====

Vehicle Title or Certificate of Origin:

Assignment:

State of Mississippi/DFA – 941

Mailing address:

Mississippi Department of Transportation, 9301
P.O. Box 1850
Jackson, MS 39215

Acknowledge Yes/No: _____

Lienholder:

Upon award, **if** MDOT issues a **Notice to Proceed** instead of a **Purchase Order**, the vehicle is being purchased through the State's Master Lease Purchase Program, and the following shall be shown as the **1st Lienholder on the Title Application**:

U.S. Bank National Association
Attention: Jacqueline McNeil
6810 Crumpler Blvd., Suite 200
Olive Branch, MS 38654

Lienholder Number: 90018867500

Acknowledge Yes/No: _____