Checklist for Preparing Basic Motor Grader (29,000 lbs. class) Specifications

HERPICC
CHECKLIST FOR PREPARING BASIC MOTOR GRADER (29,000 lbs. class) SPECIFICATIONS

PURDUE UNIVERSITY - SCHOOL OF CIVIL ENGINEERING

in cooperation with

INDIANA DEPARTMENT OF HIGHWAYS
INDIANA ASSOCIATION OF COUNTY COMMISSIONERS
INDIANA ASSOCIATION OF CITIES AND TOWNS
FEDERAL HIGHWAY ADMINISTRATION
CHECKLIST for PREPARING BASIC MOTOR GRADER (29,000 lbs. Class) SPECIFICATIONS

The following pages contain various items to be considered when seeking bids for motor graders.

General description of equipment being bid. (See "A Checklist and Sample Specifications for Single and/or Tandem Axle Dump Trucks" HERPICC Publication No. H-83-1)

Statement of requirement of manufacture of equipment.

Statement of standardization of all component parts of unit.

Statement of parts availability and access.

Statement of location of manufacturer and/or assembly of unit(s).

Statement of bid submitting requirements.

Statement of indemnification of local agency concerning patent devices.

Statement concerning description of term "or equal".

Statement of terms for accepting unit(s), new and used, year hold overs, inspection of unit(s), local, state and federal requirements, disposition of trade-in unit(s), location of units.

Weight Class: Unit equipped with Roll Over Protection, Cab, Moldboard, less Wheel Weights and Scarifier.

Weight on each axle _________

Frame: Minimum Weight per foot, 100 lbs.

(Section Modulus) ________________________________

(Other) ________________________________

(Articulated) Degrees Lt. or Rt. _________________

(Non Articulated) (Crab) __________________

Tow Hitch (Yes) (No)

Scarifier (Yes) (No)

Weight: _____________ lbs. W/O Teeth
Number of Teeth Possible: 
Overall Assembled Dimensions: Height __________ Width __________
Length __________ with attachments.
Height __________ Width __________ Length __________ without attachments.
Location: (In Front of) (Behind) Front Wheels
(Behind Rear Wheels)
Lift above ground ______________ inches.
Penetration _______________________ inches
Maximum width of cut ______________ inches.
Ripper: (Yes) (No)
Weight __________ lbs. W/O Teeth.
Number of shank pockets available.
Lift above ground ______________ inches.
Penetration _______________________ inches.
Maximum width of cut ______________ inches.
Turning Radius: Straight Frame __________ inches minimum.
Articulated Frame __________ inches minimum.

Wheels and Tires:
Wheels: Type ____________ Rim Size __________ inch.
Tires: (Radial) (Tubeless) (Tube Type)
Tread Type ____________________________
Ground Clearance
Tire Size: (13:00 - 24) ______________ inches.
(14:00 - 24) ______________ inches.
(17.5 - 25) ______________ inches.

Moldboard:
Blade Length ______________ inches.
Extensions (Yes) (No)
Height __________________________ inches.
Thicknes________________________ inches.
Blade Range - Lift Above Ground _______ inches.
Cutting Edge Thickness __________________ inches.
Blade Side Shift (Lt. or Rt.) __________ inches.
Shoulder Reach (Outside Wheels) _______ inches.
Vertical Rotation (Bank Cut) Angle __________ degrees.
Pitch at Ground Line Forward ________________ degrees.
Backward ____________________________ degrees.
Number of Pitch Positions ________________
Automatic Blade Control (Yes) (No)
Hydraulic Accumulators on Blade Lift (Yes) (No)
Circle:
Type of Construction __________________________
Diameter __________________________ inches.
Side Shift __________________________ inches.
Drawbar Type of Construction ________________
Circle Reverse Turn __________________________ degrees.
Vendor shall provide the following engine information:
Engine: (Gasoline) (Diesel)
Make __________________ Model __________________
Number of Cylinders _____________ stroke-cycle.
Bore and Stroke _______________ x ________________
Displacement __________________ cubic inches.
Continuous (Net) Flywheel Horse Power ______ @ _______ R.P.M.'s
Governed Speed _______________ R.P.M.'s
Peak Torque __________ ft. lbs. @ __________________ R.P.M.'s
Compression Ratio ______:______.

Carburetion: (Carburetor) (Naturally Aspirated) (Turbo Charged) (2 Bbl) (4 Bbl) (Other)

Cooling System Radiator Capacity _______________ quarts

Overflow recovery system (Yes) (No)

Corrosion Resistor (Yes) (No) Type ____ Location ____.

Silicone Hose System (Yes) (No)

Engine Block Heater(s) (Yes) (No) Number __ Size ___ Watts.

Type _______________ Location__________________

Weatherhead Connection (Yes) (No) Location ____________.

Radiator Fan (Standard) (Reversible)

Radiator Cap - Lockable (Yes) (No)

Thermatically Controlled Radiator Shutter System (Yes) (No)

Filters Air - Type ______ Location ________________

Prefilter (Yes) (No) Type ________________

Oil - Number of filters ______ Location ____________

Oil - Extra Capacity (Yes) (No) Type ____ Location ______

Fuel (Yes) (No) Type ____ Location ______

Water (Yes) (No) Type ____ Location ______

Hydraulic External Mounted (Yes) (No)

Starter Rated Heaviest Duty for this application by manufacturer.

Alternator/Generator - amperes (Brush) (Brushless) Make & Model ___.

Regulator (Integral) (External)

Emergency Shut Down Warning System: High Water Temperature - Low Oil Pressure Low Hydraulic Pressure Low Air Pressure

Visual and Audible warning instruments.

Ignition - (Compression Ignited) (Spark Ignited) (Ether Starting Aid)
Batteries - Quantity ____ (Standard) (Maintenance Free) Voltage ___
Ampere Hour Capacity _____ Cold Crank Power @ 0 degree F____
Dry weight (each) __________ Group Number __________

Exhaust System - Muffler
(Standard) (Stainless Steel) (Horizontal) (Vertical)

Hydraulic System:
(Closed Center) (Open Center)
Variable Displacement Pump (Yes) (No)
Pump Capacity ___________ G.P.M.
Extra Capacity Hydraulic Oil Cooler (Yes) (No)
Valve Bank Capacity __________ Spools.

Electrical System

Headlights - Type and Location ______________________________________
Tail Lights - Type and Location ______________________________________
Moldboard Lights - Type and Location ______________________________________
Watts ___________ Candle Power ______________________________________
Strobe Lights - Candle Power ________ (Fixed) (Variable)
Separate Power Source (Yes) (No)
Mounting Location(s) ______________________________________

Transmission (Manual) (Power-Shift) (Hydrostatic) (Creeper Option)
Number of (Speeds) Forward ___________ Reverse ___________
Number of Speed Ranges ___________.
Top Speed Forward ____ Top Speed Reverse ____ in each Range.
Auxillary Cooler (Yes) (No) Temperature Gauge (Yes) (No)
Auxillary Filter (Yes) (No)
Extended Warranty (Yes) (No)
Rear Axle - Manufacture Model (Standard) (No Spin)
  (Hydraulically) (Air) Actuated Locking Mechanism
  (External) (Internal) Planitaries
  Oscillating (Yes) (No)

Drive Train:
  Tandem Rear Wheel Drive (Yes) (No)
  Front Wheel Drive (Yes) (No)
  Type of Drive Mechanism
  Control Feature (Full Time) (Automatic ON) (Locked Out Off)

Brake System:
  (4-Wheel Hydraulic Power Actuated/Wet) (4-Wheel Dual Air/Hydraulic)
  Parking Brakes Specifications

Fuel Tank:
  Size of tank ________ gallons.
  Tank Marking (Diesel #1 or #2) Gasoline-Regular, Unleaded, etc.
  Sight gauge on tank (Yes) (No)
  Security Package (Yes) (No)
  Lockable Tank Caps (Fuel) (Hydraulic) (Yes) (No)
  Engine Side Panels (Yes) (No)

Cab
  Cab Ventilated and Insulated
  OSHA approved for safety, sound proofing and temperature control.
  Tinted Glass (Yes) (No) (Windshield Only) (All Windows)
  Inside Dome Light (Manual Operated) (Door Operated)
  Cigar Lighter (Yes) (No)
  Seat (Standard) (Adjustable Suspension)
  Horn(s) (Yes) (No) (Decibel Output)
Heater and Defroster (Standard) (Heavy Duty) (Front) (Rear)
Air Conditioning (Yes) (No) (Standard) (Deluxe)
Sun Visors (Yes) (No)
Radio (Yes) (No) (AM) (AM/FM)
Windshield Wipers & Washers (2 Speed) (Intermittent) (Electric)
(Air) (Front) (Rear)
Dual Mirrors - Size
Location (Inside) (Outside)
Adjustable Convex Mirror on Right Side (Yes) (No) Size
Backup Alarm (Yes) (No) Type
Exterior Grab Handles - Type
Height of Operation Platform Above Ground
Other

Dash Mounted Gauges:
Fuel (Yes) (No)
Tachometer (Yes) (No)
Hourmeter (Yes) (No)
Ammeter (Light) (Needle Type) (Calibrated)
Oil Pressure (Light) (Needle Type) (Calibrated)
Water Temperature (Light) (Needle Type) (Calibrated)
Transmission Temperature (Light) (Needle Type) (Calibrated)
Hydraulic Oil (Pressure) (Temperature) (Yes) (No)

Warning Lights:
High Water Temperature/Low Oil Pressure Emergency Shut Down Warning System shall be dash mounted. (Yes) (No)

Optional Equipment:
Tool Box (Yes) (No)
Articulation Indicator (Yes) (No)
Engine Disconnect (Coldweather Start) (Yes) (No)
Sound Baffled Engine Side Shield (Yes) (No)
Seat Belt (Yes) (No)
Pusher Block (Yes) (No)
Bull Dozer (Yes) (No)
Snow Plow Hitch (Yes) (No)
Snow Plow (Yes) (No)
Snow Plow Wing (Yes) (No)
Windrow Eliminator (Yes) (No)
Other

Paint - Color ____________ Type ______________
Preparation __________________________________________

Warranty of Unit
(Extended Warranty) (Purchaser Designated Option)
(Manufacturers Standard) (Repair Guarantee)
(Scheduled Maintenance Guarantee)
(Guaranteed Minimum Repurchase Price Schedule)
Description __________________________________________

Manuals - Operators, parts and service (Number of each required _____)

Delivery Time
List of number of weeks required for delivery of Unit(s) from date of order: ________ weeks