**MINIMUM SPECIFICATIONS FOR ONE (1) LOADER BACKHOE W/4-WHEEL DRIVE, EXTENDED BOOM**

**BASIC SPECIFICATIONS**

**ENGINE**

**FOUR CYLINDER, TURBOCHARGED, ISOLATION MOUNTED DIESEL ENGINE AND SHALL BE DESIGNED AND BUILT BY MANUFACTURER**

**ENGINE SHALL BE CERTIFIED TO EPA INTERIM TIER4/EU STAGE III B EMISSIONS**

**PREFERRED ENGINE TO HAVE INDIVIDUALLY REPLACEABLE, WET**

**SLEEVE CYLINDER LINERS WILL ACCEPT CAST AND BLOCK**

**ENGINE DISPLACEMENT SHALL BE NO LESS THAN 4.4 LITERS (260 CU. IN.)**

**ENGINE RATED NET PEAK POWER (9ISO9249) SHALL BE NO LESS THAN**

**107 HP (80KW) @ 2000 RPMS**

**DAILY CHECKPOINTS SHALL BE ACCESSIBLE FROM THE RIGHT SIDE OF THE ENGINE AND SHALL BE DONE FROM THE GROUND**

**ENGINE SHALL HAVE A SERPENTINE BELT WITH AUTOMATIC BELT**

**TENSIONER**

**UNDER-HOOD ENGINE AIR CLEANER SHALL BE DRY TYPE, DUAL**

**ELEMENT WITH EVACUATOR VALVE AND RESTRICTION SENSOR IN**

**CAB**

**ENGINE SHALL HAVE UNDERHOOD AFTER TREATMENT DEVICE (DOC/**

**DPF) OR COMPATIBLE STYLE**

**HOOD SHOULD TILT FOR EASY ACCESS**

**ENGINE EQUIPPED WITH WATER-IN-FUEL SENSOR**

**ENGINE COOLANT SHALL BE RATED TO -40 DEGREES (-40C)**

**ENGINE SHALL BE EQUIPPED WITH AN OIL-TO-WATER ENGINE OIL COOLER WITH COOLANT RECOVERY TANK**

**BACKHOE SHALL HAVE ELECTRONICALLY CONTROLLED, VARIABLE**

**RATE SUCTION-TYPE FAN WITH GUARD**

**FOLDOUT HINGED COOLING SYSTEM WITH REMOTE MOUNTED TRANSMISSION AND HYDRAULIC COOLERS**

**POWER TRAIN**

**THE TRANSMISSION SHALL BE POWERSHIFT WITH TORQUE CONVERTOR WITH MAXIMUM TRANSPORT SPEED OF 25MPH, NO**

**CLUTCH, FULLY SYNCHRONIZED FIVE FORWARD AND THREE**

**REVERSE SPEEDS**

**MACHINE SHALL HAVE THE OPTION OF HAVING AUTOSHIFT**

**TRANSMISSION**

**THE AXLE SHALL BE MECHANICAL FRONT WHEEL DRIVE (MFWD)**

**WITH TRACTION CONTROL LIMITED-SLIP DIFFERENTIAL WITH**

**ELECTRIC ON/OFF CONTROL**

**THE AXLE SHOULD BE SEALED TO PROTECT AGAINST CONTAMINATION**

**THE MFWD CAN BE ENGAGED ON THE FLY DURING OPERATION**

**MACHINE WILL AUTOMATICALLY ENGAGE MFWD WHEN BRAKES ARE**

**APPLIED FOR FOUR WHEEL BRAKING**

**THE REAR AXLE SHALL DAVE A DIFFERENTIAL LOCK, ELECTRIC**

**FOOT-ACTUATED AS STANDARD EQUIPMENT**

**TRANSMISSION OIL COOLER STANDARD EQUIPMENT**

**BACKHOE MUST HAVE HYDROSTATIC POWER STEERING WITH EMERGENCY MANUAL MODE**

**BACKHOE SHALL HAVE A DIAL THROTTLE**

**THE FRONT AXLE SHALL HAVE REMOTE GREASE BANK FOR FRONT AXLE FOR EASY ACCESS**

**THE SERVICE BRAKES SHALL BE INBOARD, WET-MULTIPLE DISK, SELF**

**-ADJUSTING HYDRAULICALLY ACTUATED AND SEALED FROM**

**CONTAMINATION**

**THE PARKING BRAKE SHALL BE INDEPENDENT OF SERVICE BRAKES,**

**SPRING APPLIED HYDRAULICALLY RELEASED PERFERRED**

**PERFERRED PARK BRAKE THAT WILL AUTOMATICALLY, RATHER THAN MANNUAL, APPLY WHEN ENGINE IS SHUT OFF**

**HYDRAULICS**

**HYDRAULIC PUMP SHALL BE AXIAL PISTON**

**HYDRAULIC PUMP SHALL BE AT 42 GPM AND SYSTEM PRESSURE AT**

**3600 PSI WITH PRESSURE COMPENSATING, LOAD SENSING**

**SHALL HAVE A HYDRAULIC COOLER WITH INDEPENDENT RESERVOIR**

**MACHINE SHALL BE EQUIPPED WITH AUTO IDLE TO LOWER RPM**

**WHEN HYDRAULICS ARE NOT ACTIVE**

**AN AUTO BUCKET RETURN TO DIG CONTROL WILL BE STANDARD**

**ELECTRICAL**

**THE BACKHOE SHALL HAVE A 12-VOLT SYSTEM WITH 120 AMP**

**ALTERNATOR MINIMUM**

**SINGLE BATTERY AT 12-VOLT, SYSTEM WITH 950CCA, 190 MINUTE**

**RATED RESERVE**

**CAB SHALL BE PRE-WIRED FOR ROTATING BEACON**

**UNIT SHALL BE EQUIPPED WITH 10 HALOGEN DRIVING AND WORKING**

**LIGHTS, (4) FRONT DRIVING/WORKING, (4) REAR; (2) SIDE DOCKING**

**LIGHTS**

**UNIT SHALL BE EQUIPPED WITH TELEMATICS SYSTEMS FROM**

**MANUFACTURER THAT CAN PROVIDE FLEET MANAGEMENT, LOGISTICS AND REMOTE DIAGNOSTICS**

**UNIT SHALL HAVE TWO FRONT AND TWO REAR TURN SIGNAL/**

**FLASHING AND TWO REAR STOP AND TAIL; LIGHTS AND TWO REAR**

**REFLECTORS**

**OPERATOR STATION**

**UNIT SHALL BE EQUIPPED WITH ISOLATION MODULAR MOUNTED ROPS/FOPS CANOPY AND MOLDED ROOF**

**ACCESS TO CAB SHALL BE FROM RIGHT AND LEFT SIDE, RIGID SELF**

**CLEANING STEPS**

**3” RETRACTABLE SEAT BELT SHALL BE PROVIDED**

**INTERIOR REAR VIEW MIRROR AND (2) 12-VOLT OUTLETS SHALL BE**

**PROVIDED**

**UNIT SHALL HAVE ILLUMINATED ELECTRONIC GAUGES WITH**

**AUDIBLE WARNING FOR: ENGINE COOLANT TEMPERATURE,**

**TRANSMISSION OIL PRESSURE AND FUEL LEVEL**

**THE MONITOR SYSTEM SHALL HAVE AUDIBLE AND VISUAL WARNINGS**

**FOR: ENGINE AIR RESTRICTION, LOW ALTERNATOR VOLTAGE, ENGINE**

**OIL PRESSURE AND TEMPERATURE, HYDRAULIC FILTER RESTRICTION,**

**PARK BRAKE ON/OFF, TRANSMISSION OIL TEMPERATURE, FUEL, HOUR**

**METER AND LOW BRAKE PRESSURE**

**UNIT SHALL HAVE DIGITAL DISPLAY FOR: ENGINE RPM, ENGINE HOURS AND SYSTEM VOLTAGE**

**THE FOOT THROTTLE SHALL BE SUSPENDED**

**THE MACHINE WILL HAVE CAB WITH AIR CONDITIONING AND HEATER**

**FROM FACTORY**

**SEAT SHALL BE SUSPENSION CLOTH SWIVEL, WITH FULLY ADJUSTABLE ARM RESTS AND LUMBAR SUPPORT**

**GENERAL SPECIFICATIONS**

**VANDAL PROTECTION SHALL COVER THE INSTRUMENT PANEL, ENGINE HOOD, TOOL BOX, HYDRAULIC RESERVOIR AND FUEL FILLER**

**SHALL BE LOCKABLE**

**MUST HAVE AN EASY TO READ PERIODIC MAINTENANCE AND GREASE CHART POSTED ON THE MACHINE**

**FUEL TANK MUST HOLD NO LESS THAN 41 GALLONS AND SHALL BE**

**ACCESSIBLE FROM THE GROUND**

**OPERATING WEIGHT WITH FULL FUEL TANK, OPERATOR 175 LBS. AND**

**STANDARD EQUIPMENT SHALL BE NO LESS THAN 19,050 LBS.**

**FLUID LEVELS SHOULD BE EASILY CHECKED BY SIGHT GAUGES,**

**DIPSTICKS AND OVERFLOW TANK**

**THE MAINFRAME SHALL HAVE FOUR BUILT IN TIE DOWNS, TWO IN**

**FRONT AND TWO IN REAR FOR SAFE TRANSPORT**

**UNIT SHALL HAVE REVERSIBLE STABLIZER PADS**

**BACKHOE**

**THE BACKHOE SHALL HAVE EXTENDABLE DIPPERSTICK WITH MINIMUM DIGGING DEPTH AT LEAST 15’9” (RETRACTED) AND EXTENDED DEPTH AT LEAST 19’6”**

**EXTENDABLE DIPPERSTICK SHALL EXTEND NO LESS THAN 3’6”**

**THIS STABLIZER SHALL BE EQUIPPED WITH ANTI-DRIFT IN BOTH**

**DIRECTIONS**

**BACKHOE SHALL HAVE POWER CURVE DESIGN FOR LOADING**

**CENTER OF TRUCK**

**THE MACHINE SHALL HAVE FACTORY INSTALLED PILOT BACKHOE**

**CONTROLS WITH PATTERN-SELECTION FEATURE**

**MACHINE SHALL BE ABLE TO LIFT AT 12’ MINIMUM 2,926 LBS. BOOM**

**LIFT**

**OVERALL REACH SHALL BE 27’4” FROM CENTER LINE REAR AXLE**

**24” HEAVY DUTY BUCKET WITH TEETH**

**1,000-LBS. COUNTERWEIGHT PROVIDED ON MACHINE**

**LOADER**

**MACHINE SHALL HAVE A MINIMUM OF A 1.23 CUBIC YARD MULTI-**

**PURPOSE BUCKET 4 & 1**

**LIFT CAPACITY TO FULL HEIGHT SHALL BE 6,100 LBS.**

**LOADER DUMP CLEARANCE AT 45 DEGREES SHALL BE NO LESS THAN**

**8’10”**

**BUCKET BREAKOUT FORCE SHALL BE NO LESS THAN 10,300 LBS.**

**LOADER SHALL HAVE HYDRAULIC SELF-LEVELING AND BUCKET**

**INDICATOR**

**LOADER SHALL HAVE A SINGLE LEVER WITH INTERGRATED ELECTRO-HYDRAULIC CONTROL OF AUXILLARY HYDRAULICS. LEVER**

**ALSO EQUIPPED WITH CLUTCH DISCONNECT, MOMENTARY MFWD**

**AND MFWD ON/OFF**

**THE LOADER SHALL HAVE A NON-REMOVABLE, HINGED LOADER BOOM SERVICE LOCK**

**LOADER HINGE PIN HEIGHT SHALL BE NO LESS THAN 11’**

**TIRES**

**FRONT – 12.5/80X18 (14-PLY)**

**REAR – 19.5X24 (10-PLY)**

**PREFERRED FIRESTONE OR GOODYEAR**

**OTHER**

**BIDDER SHALL HAVE A CERTIFIED PARTS AND SERVICE CENTER WITHIN 50 MILES OF ADAMS COUNTY, MISSISSIPPI**

**WARRANTY**

**STANDARD MANUFACTURER WARRANTY – 1 YEAR OR UNLIMITED**

**HOURS WHICHEVER OCCURS FIRST**

**EXTENDED GOVERNMENTAL POWER TRAIN PLUS HYDRAULICS**

**MACHINE WARRANTY 5 YEARS OR 5000 HOURS WHICHEVER COMES**

**FIRST**

**MACHINE PURCHASE MAY BE BASED ON GUARANTEED BUYBACKS AT**

**3 YEARS OR 3000 HOURS, 4 YEARS OR 4000 HOURS, AND 5 YEARS OR 5000**

**HOURS; WHICHEVER OCCURS FIRST (HOURS OR TERM)**

**DELIVERY TIME MAY BE A FACTOR IN DETERMINING THE LOWEST AND BEST BID (PREFERRED 60 DAYS OR LESS AFTER RECEIVING**

**PURCHASE ORDER)**