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الشركة الوطنية لحفر وصيانة ابار النفط

**National Oil Well Drilling & Workover Company**

احدى شركات المؤسسة الوطنية للنفط

**N.O.C Company**

 **CAT D3512B CATERPILLAR LAND DRILLING SCR GENERATOR SPECIFICATION.**

 **Our Ref: NWD-TC-2023-T-70-05**

| ITEM # | Quantity | UOI | DESCRIPTION |
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| 01 | **03** | UNITS | **CAT D3512B** CATERPILLAR GENERATOR SET, 3512B **LAND DRILLING** SCR GENERATORS, DIESEL OILFIELD GENERATOR SET, OPEN TYPE. MADE: **USA** BRAND **NEW & UNUSED** Power Rating: 1045 eke Power Rating @ 0.8 pf / 1492KVA  Voltage Output: 600Vac  Phase: 3 Ø (phase) Frequency / RPM: 60Hz / **1200 RPM** COMPOSED OF THE FOLLOWING:**A**) **FOR ENGINES** **a**). Air Inlet system \*Corrosion- resistant after cooler core \*Air inlet shutoff \*Dual element & heavy duty air cleaners with  \*Service Indicator \*With manual shutoff System **b**). Cooling system \*Separate-circuit after cooled \*Outlet controlled jacket water thermostat \*Jacket water pump – gear driven \*Dual outlet \*After cooler water pump – gear driven \*After cooler water thermostat \* Radiator & fan for desert operation with ambient temperature to 140 Degree F /50◦C \* Radiator with guard \* Coolant drain lines with valve and level sight gauge \* Fan & belts guards \* Jacket Water pump \*Coolant level sensor \*Coolant conditioner   **c**). Exhaust system  \* Dry exhaust manifold \* Flanged faced outlets \* Dual turbochargers, water cooled bearings \* Stainless steel exhaust flex fittings \* Elbows, flanges, expanders & Y adapters \* Elbow, 305 mm (12 in) |

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|  |  |  | \* Muffler, 356 mm (14 in), spark arresting, includes companion\* flanges, clean-out box, and spark box\* Muffler, 305 mm (12 in), spark arresting, includes companion\* flanges, clean-out box, and spark box \* Spark arrestors d). Fuel System  \* Fuel transfer pump \* Fuel return line with flexible connection \* Electronic unit injectors \* Primary fuel filter with water separator \* Fuel Pressure Gauge  e). Lube System \* Crankcase breather \* Oil cooler \* Shallow oil pan \* Oil drain extension, 2 in NPT female connection \* Crankcase fumes disposal \* Oil level regulator \* Centrifugal Oil Cleaner \* Oil filler  \* Gear type lube oil pump f). Governing \* CATERPILLAR ADEM control systemg). Starting \*Electrical starting System 24 Vdch). Instrument Panel \* Emergency stop button \* Analog gauges: \* Fuel pressure \* Engine oil pressure \* Engine oil temperature \* Engine coolant temperature \* DC voltage \* Engine percent load \* EMCP 4.4 control panel \* 5.5-inch graphical display \* 16 languages supported \* Engine/generator monitoring and protection \* CAN, RS 485 MODBUS, Ethernet communications supported \* Remote e-stop/start/stop \* Engine start and crank attempt counterB) **FOR GENERATOR (600Vac, 60Hz, 1045 EKW)** \* SE Excitation \* 6 Poles \* Class H Insulation RISE (127°C) \* Reactive Droop \* Bus bar Connections. \* Anti Condensate Space Heaters \* Cable Access Box without load sharing  Without voltage regulator |
| ITEM # | Quantity | UOI | DESCRIPTION |
|  |  |  |  C) **ELECTRIC MODULAR CONTROL PANEL (EMCP 4.4)** **WITH THE FOLOWING FEATURES:**a). 140 mm (5.5 in) Graphical Display• Generator AC voltage• 3-phase (L-L & L-N)• ± 0.25% accuracy• rpm and battery voltage• Generator AC current (per phase and average) • Generator frequency• Power metering (kW, kVA, kVAr, pf)• Hour meters (kW-hour, kVAr-hour)• Engine oil pressure (psi, kPa or bar)• Engine oil temperature (°C or °F)• Engine coolant temperature (°C or °F)• Multiple language support• Engine start and crank attempt counter• Real time clockb). Communication • Accessory CAN data link • RS-485 annunciator data link • RS-485 SCADA (Modbus RTU) • Ethernet SCADA (Modbus TCP)c). Controls • Auto/start/stop Engine cool down timer • Emergency stop • Engine cycle crank • Programmable cycle timerd). Generator Set Protection • Over/under voltage • Over/under frequency • Generator phase sequence Over current (timed and inverse) • Reverse kW, kVA • Current balance • Low oil pressure • High coolant tempLow coolant level • Fail to start • Over speede.) Outputs • 16 programmable digital outputs • 3 programmable (4-20mA or ±10V) programmable (PWM) Inputsf.) Emergency stop • Remote start • 12 programmable digital inputs • Oil pressure and water temperature • 3 programmable inputs (±10V, PWM, current, or resistive) • Oil temperature, fuel level mounting. |

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| ITEM # | Quantity | UOI | DESCRIPTION |
|  |  |  | **D) MOUNTING**.\* INNER BASE FOR MOUNTING ENGINE AND GENERATOR ENGINE AND GENERATOR MOUNTING GROUP COUPLING /ENGINE AND GENERATOR MOUNTING SUPPORT TO ISNTALL AT GENERATOR SCR HOUSE, TOWING POINTS & FORKLIFT POCKETS, SKID BASE WITH DRAGGING POINTS. **E) GENERAL DETAILS**. \* Paint - Caterpillar Yellow except rails & radiators should be gloss black. \* SAE Standard Rotation\* Flywheel teeth 183 & Flywheel Housing - SAE No. 00\* Machine should be Brand New & unused\* Remanufactured or Refurbished Generators not acceptable \* **Must be genuine & manufactured in USA.** \* Complete with Test Certificate, Certificate of conformance and other standard related documents. \* Warranty. \* Training for 6 persons (3 mechanics & 3 electricians) including accommodation, Food and general expenses. \* Installation and commissioning. \* Inspection and Witnessing by NWD personnel prior to shipment. \* The offer must include Detailed Technical Offer, Data sheet, they can make also checklist based on our requirements for easy evaluation. \* Service Parts Manual should be included with CD ROM, 4sets. \*\*\*\*\*\*\*\*\* **NOTHING FOLLOWS** \*\*\*\*\*\*\*\*\*\*\*\*\* |