

STATEMENT OF WORK (SOW)
Generator PM
Coatesville VA Medical Center
March 9, 2016

1. Contract Title Emergency Generator Yearly PMs and Load-bank Testing FY16 and beyond

2. Background. JCAHO requirements require yearly testing of any emergency generators that do not meet 30% load requirements during monthly checks and the completion of industry standard preventative maintenance.

3. Scope. Perform 4.5Hr Load-bank tests on 5 separate Generators (14, 63, T-21, 74A-1, and 74A-2Generators). Scope shall include all parts, equipment, travel time and labor required to provide annual Preventative Maintenance (PMs) and conduct Load-Bank Testing for:

1. Cummins M# DQ-QAB 133 7896 S# I130567479 13.8KV 1825A located at 74A
2. Cummins M# DQ-QAB 133 8154 S# I130567480 13.8KV 1825A located at 74A
3. Stewart and Stevenson M# Spectrum 250DSE S# 6R-0601543 277/480V 250KW located at Bldg. 14 Boiler Plant
4. Stewart and Stevenson M# 220DSE No S# 120-480V 200KW Portable located at 138 Hospice
5. McGraw-Edison M# SFTA I870929377 240V 3Ph. 3w Delta 200 KW located at Bldg. 63 south pump station at west side of Coatesville HS.

Testing must be completed by May 29th of each year.

Vendor shall provide documentation for Cummins certified technicians. This service should include a yearly inspection and performance of the following items:

Battery & Battery Charger System

- Check battery charger functions
- Cable connections, terminal cleanliness and security
- Check electrolyte level, vent caps of all cells in the starting batteries
- Battery Conductance Test

Fuel System

- Inspect main tank/day tank fuel level
- Inspect day tank controls and pumps. Test operate day tank controls (where available)
- * Change fuel filters – replace all fuel filters (engine primary and secondary filters) at each scheduled service interval



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* Check fuel transfer pumps – test the operation of the fuel transfer pump at each scheduled service interval by pressing the test button and observing the results. Check for leaks. Test functions and perform annual maintenance of Pneumercator and fuel scrubber / polisher systems.

* Drain water separators – water separators should be drained at each scheduled service interval

- Inspect all fuel hoses, clamps, pipes, components, and fittings
- Inspect governor linkage
- Visually inspect rupture/containment basin
- Water I~ Fuel Test - Sub-base, day tanks
- Optional - fuel sample for laboratory analysis*

Engine Cooling System

- Inspect all hoses and clamps for leaks, coolant level and condition
- Inspect radiator cap, radiator thermostat for operation and filler neck condition
- Inspect drive belts, observe alignment and deflection
- Observe coolant heater operations
- Utilize DCA test strip to record coolant properties
- Inspect radiator surfaces, shrouds, and barriers for obstruction
- Visually inspect low temperature after cooler coolant
- * Change coolant filter – the diesel coolant additive water filters shall be replaced at scheduled service interval
- Optional -coolant sampling'

Engine & Lubrication System

- Inspect lubrication system (visually check oil level)
- Inspect crankcase ventilation system
- Inspect spark ignited ignition system

Intake/Exhaust System

- Inspect air cleaner element and entire intake system. Replacement of additional air filter elements will be quoted separately.
- Inspect exhaust system piping connections to include rain cap associated with air intake system at each scheduled service interval
- * Clean crankcase breather element – remove and clean the crankcase breather element at each scheduled interval.
- Inspect louver operations

Generator Controls & Power Connections

- Visually inspect all engine mounted wiring, senders, and devices
- Visually inspect all control mounted components and wiring
- Lamp test all lights and indicators
- Visually inspect breaker and power connections
- Manually operate generator main breaker(s) open and closed*



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Diagnose all alarms and develop a repair quotation if not covered in the contract

Generator Operations

- Start and observe generator and equipment operations
- Verify engine and generator safeties for proper operation
- System test with or without load

Automatic Transfer Switches

(Paralleling Switchgear, Bypass Switchgear, Manual Transfer Switches)

- Visually inspect all power and control wiring
- Visually inspect switch mechanism and enclosure
- Visually inspect controls and time delays settings
- Verify function of exercise clock

FULL SERVICE (Includes Inspection)

Operational & Functional Review of Generator Critical Components

- Inspect engine cooling fan & fan drives for excessive wear or shaft wobble
- Check all pulleys, belt tensioners, slack adjusters & idler pulleys for travel, wear & overall condition
- Inspect/lubricate drive bearings, gear or belt drives, Lovejoy and other shaft connecting hardware

Lubrication Oil and Filtration Service

- Change engine lubrication oil
- Change primary lubrication and bypass filters
- Change fuel filters
- Post lube service operation of Generator (unloaded) at rated temperature
- * Check hydraulic/mechanical governor oil level – on engines equipped with mechanical or hydraulic governors, the oil level shall be checked at each scheduled service interval.
- Optional - oil sample for laboratory analysis

5. Risk Control – Test and inspection days must be coordinated with COR and Coatesville VA Medical Center

6. Place of Performance.

All work will be performed at the VA Medical Center Coatesville.

7. Point of Contact



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Minimum of 3 week notice must be given for coordination with COR to obtain WRITTEN APPROVAL from the Chief of Engineering in order to proceed with Generator and Load Bank Testing to ensure coordination throughout the CVAMC Campus.