

**Preventive Maintenance Contract
Scope of Work
For
Embassy Compound Generators**

**United States Embassy
Dar Es Salaam**

SECTION 1 - THE SCHEDULE

1.0 DESCRIPTION

The American Embassy in **Dar Es Salaam** requires preventive maintenance services for Embassy compound standby generator sets. These services shall result in all systems being serviced under this agreement being in good operational condition when activated.

1.1. TYPE OF CONTRACT

This is a firm fixed price contract. Prices for all Contract Line Item Numbers (CLIN) shall include proper disposal of toxic substances as per Item 8.4 where applicable. No additional sums will be payable for any escalation in the cost of materials, equipment or labor, or because of the contractor's failure to properly estimate or accurately predict the cost or difficulty of achieving the results required. The contract price will not be adjusted due to fluctuations in currency exchange rates.

1.2. PERIOD OF PERFORMANCE

The contract will be for a period of one-year, with a maximum of four one-year optional periods of performance and will be expected to commence no later than January 2016.

2.0 PRICING

The rates below include all costs associated with providing preventive maintenance services in accordance with the attached scope of work, and the manufacturer's warranty including materials, labor, insurance (see FAR 52.228-4 and 52.228-5), overhead, profit and GST (if applicable).

2.1. Base Year. The Contractor shall provide the services shown below for the base period of the contract and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
001	Generator # 1	1	Semi annual	1		
001-A	Generator # 1	1	Annual	1		
002	Generator # 2	1	Semi annual	1		
002-A	Generator # 2	1	Annual	1		
	Total Base Year					

2.2. Option Year 1. The Contractor shall provide the services shown below for Option Year 1 of the contract, and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
101	Generator # 1	1	Semi annual	1		
101-A	Generator # 1	1	Annual	1		
102	Generator # 2	1	Semi annual	1		
102-A	Generator # 2	1	Annual	1		
	Total Option Year 1					

2.3. Option Year 2. The Contractor shall provide the services shown below for Option Year 2 of the contract, and continuing for a period of 12 months.

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
201	Generator # 1	1	Semi Annual	1		
201-A	Generator # 1	1	2 year check	1		
201-B	Generator # 2	1	Semi Annual	1		
202	Generator # 2	1	2 year check	1		
	Total Option Year 2					

2.4. Option Year 3. The Contractor shall provide the services shown below for Option Year 3 of the contract, and continuing for a period of 12 months

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
301	Generator # 1	1	Semi annual	1		
301-A	Generator # 1	1	Annual	1		
302	Generator # 2	1	Semi annual	1		
302-A	Generator # 2	1	Annual	1		
	Total Option Year 3					

2.5. Option Year 4. The Contractor shall provide the services shown below for Option Year 4 of the contract, and continuing for a period of 12 months

CLIN	Description	Quantity of Equipment	Type of services	No. of service	Unit price / service (\$)	Total per year (\$)
401	Generator # 1	1	Semi annual	1		
401-A	Generator # 1	1	Annual	1		
402	Generator # 2	1	Semi annual	1		
402-A	Generator # 2	1	Annual	1		
	Total Option Year 4					

2.6. Total for all years:

Base Year	\$ _____
Option Year 1	\$ _____
Option Year 2	\$ _____
Option Year 3	\$ _____
Option Year 4	\$ _____
TOTAL	\$ _____

2.7 Repair option. Repairs are NOT included under this agreement (see 7.1.3) and are to be done outside this contract. However, we would like to have current labor rates in the event that there is an issue discovered during the preventive maintenance of the specified equipment. Please provide your current labor rates in the Repair Option fields below. As stated in 7.1.3 any necessary repairs or parts will be submitted for approval and then billed against a separate PO. The Contractor is not approved to do any additional work without approval.

Repair Labor Rates	
Base Year	\$ _____/hr
Option Year 1	\$ _____/hr
Option Year 2	\$ _____/hr
Option Year 3	\$ _____/hr
Option Year 4	\$ _____/hr

3.0 NOTICE TO PROCEED

After Contract award and submission of acceptable insurance certificates and copies of all applicable licenses and permits, the Contracting Officer will issue a Notice to Proceed. The Notice to Proceed will establish a date (a minimum of ten (10) days from date of Contract award unless the Contractor agrees to an earlier date) on which performance shall start.

DESCRIPTION/SPECIFICATION/WORK STATEMENT

4.0 EQUIPMENT AND PERFORMANCE REQUIREMENTS

4.1. The American Embassy in Dar Es Salaam requires the Contractor to maintain the following systems in a safe, reliable and efficient operating condition.

DESCRIPTION OF EQUIPMENT:

- CATERPILLER (CAT) generators Model CAT3508B – quantity 2each
- Serial # CNB00300 and CNB00301
- Rating: 800KW; 1000KVA

4.2. The Contractor shall provide all necessary managerial, administrative and direct labor personnel, as well as all transportation, equipment, tools, supplies and materials required to perform inspection, maintenance, and component replacement as required to maintain the systems in accordance with this work statement. Under this Contract the Contractor shall provide:

- The services of trained and qualified technicians to inspect, adjust, and perform scheduled preventive maintenance.

4.3. Performance Standards

The Contractor shall schedule all preventive maintenance work with the site Facility Manager to avoid disrupting the business operation of the Embassy.

5.0 HOURS OF PERFORMANCE

5.1. The Contractor shall maintain work schedules. The schedules shall take into consideration the hours that the staff can effectively perform their services without placing a burden on the security personnel of the Post. The Contractor shall deliver standard services between the hours of Monday to Thursday – 07.30hrs to 17.00hrs & Friday – 07.30hrs to 11.30hrs. No work shall be performed on US Government and local holidays. Below is a list of the holidays.

Jan 01 +	New Year's Day	Am
Jan 12	Zanzibar Revolution Day	Local
Jan 18	Birthday of Martin Luther King, Jr.	Am
Feb 15	Washington's Birthday	Am
March 25	Good Friday	Local
March 28	Easter Monday	Local
April 7	Karume Day	Local
April 26	Union Day	Local
May 30	Memorial Day	Am
Jul 04	Independence Day	Am
Jul 07	International Trade Fair Day	Local
Jul 7& 8	Eid El Fitr – two day subject to moon sighting	Local
Aug 08	Peasants Day	Local
Sep 05	Labor Day	Am
Sept 13	Eid El Haj – subject to moon sighting	Local
Oct 10	Columbus Day	Am
Oct 14	Mwalimu Nyerere Day	Local
Nov 11	Veterans Day	Am
Nov 24	Thanksgiving Day	Am
Dec 09	Independence Day	Local
Dec 26	Christmas	Am / Local

6.0 ACCESS TO GOVERNMENT BUILDINGS AND STANDARDS OF CONDUCT

6.1 General. The Contractor shall designate a representative who shall supervise the Contractor's technicians and be the Contractor's liaison with the American Embassy. The Contractor's employees shall be on-site only for contractual duties and not for any other business or purpose. Contractor employees shall have access to the equipment and equipment areas and will be escorted by Embassy personnel.

6.2 Personnel Security. The Government reserves the right to deny access to U.S.-owned and U.S.-operated facilities to any individual. The Contractor shall provide the names, biographic data and police clearance on all Contractor personnel who shall be used on this Contract prior to their utilization.

Submission of information shall be made within 5 days of award of contract. **No technician will be allowed on site without prior authorization. Note: this may include cleared personnel if advance notice of visit is not given at least one week before the scheduled visit.**

6.2.1 Vehicles. Contractor vehicles will not be permitted inside the embassy compound without prior approval. If you need to have vehicle access please submit your vehicle information (Make, Model, License Plate #) along with a written justification as to why access is necessary. This should be submitted to the Facility Manager at least one (1) week prior to the visit.

6.2.1 Government shall issue identity cards to Contractor personnel, after they are approved. Contractor personnel shall display identity card(s) on the uniform at all times while providing services under this contract. These identity cards are the property of the US Government. The Contractor is responsible for their return at the end of the contract, when an employee leaves Contractor service, or at the request of the Government. The Government reserves the right to deny access to U.S.-owned and U.S.-operated facilities to any individual.

6.3 Security Clearances. All Work under this contractor that are designated as non-CAA areas may be performed by un-cleared American or local workers. However, all work done in CAA and PCC areas shall be performed by cleared American Construction personnel as needed to complete the services. The Contractor shall work closely with the COR, the Post Facility Manager [FM] or the General Services Officer [GSO].

6.4 Standards of Conduct

6.4.1 General. The Contractor shall maintain satisfactory standards of employee competency, conduct, cleanliness, appearance, and integrity and shall be responsible for taking such disciplinary action with respect to employees as may be necessary. Each Contractor employee shall adhere to standards of conduct that reflect credit on themselves, their employer, and the United States Government. The Government reserves the right to direct the Contractor to remove an employee from the worksite for failure to comply with the standards of conduct. The Contractor shall immediately replace such an employee to maintain continuity of services at no additional cost to the Government.

6.4.2 Uniforms and Personal Equipment. The Contractor's employees shall wear clean, neat and complete uniforms when on duty. All employees shall wear uniforms approved by the Contracting Officer's Representative (COR). The Contractor shall provide, to each employee and supervisor, uniforms and personal equipment. The Contractor shall be responsible for the cost of purchasing, cleaning, pressing, and repair of the uniforms.

6.4.3 Neglect of Duties. Neglect of duties shall not be condoned. This includes sleeping while on duty, unreasonable delays or failures to carry out assigned tasks, conducting personal affairs during duty hours and refusing to render assistance or cooperate in upholding the integrity of the worksite security.

6.4.4 Disorderly Conduct. The Contractor shall not condone disorderly conduct, use of abusive or offensive language, quarreling, and intimidation by words, actions, or fighting. Also included is participation in disruptive activities that interfere with normal and efficient Government operations.

6.4.5 Intoxicants and Narcotics. The Contractor shall not allow its employees while on duty to possess, sell, consume, or be under the influence of intoxicants, drugs or substances which produce similar effects.

6.4.6 Criminal Actions. Contractor employees may be subject to criminal actions as allowed by law in certain circumstances. These circumstances include but are not limited to the following actions: falsification or unlawful concealment, removal, mutilation, or destruction of any official documents or records or concealment of material facts by willful omission from official documents or records; unauthorized use of Government property, theft, vandalism, or immoral conduct; unethical or improper use of official authority or credentials; security violations; organizing or participating in gambling in any form; and misuse of weapons.

6.4.7 Key Control. The Contractor **will not** be issued any keys. The keys will be checked out from Post 1 by a "Cleared American" escort on the day of service requirements.

6.4.8 Notice to the Government of Labor Disputes. The Contractor shall inform the COR of any actual or potential labor dispute that is delaying or threatening to delay the timely performance of this contract.

7.0 SCHEDULED PREVENTIVE MAINTENANCE

7.1. General

7.1.1. The Contractor shall perform preventive maintenance as outlined in Exhibit A - STATEMENT OF WORK. The objective of scheduled preventive maintenance is to eliminate system malfunction, breakdown and deterioration when units are activated/running.

7.1.2. The Contractor shall inventory, supply and replace expendable parts (eg, filters, belts, hoses, gaskets) that have become worn down due to wear and tear. The Contractor shall maintain a supply of expendable and common parts on site so that these are readily available for normal maintenance to include: hoses, belts, oil, chemicals, coolant, filters (Air, Fuel, Oil), grease, sealant, thermostat, fuses; in addition to the appropriate tools, testing equipment, safety shoes and apparel for technicians, personal protective equipment (hands, hearing, eye protection), MSDS, cleaning material and oil spill containment kits. The contractor should inventory the supply after each visit and order replacement supplies and have them delivered on site.

7.1.3. Exclusion. This contract does NOT include repair of equipment and replacement of hardware (eg bearings, pistons, piston rings, crankshaft, gears.) **Hardware replacements will be separately priced out by the Contractor for the Government's approval and acceptance.** The Government has the option to accept or reject the Contractor's quote for parts and reserves the right to obtain similar spare parts from other competitive sources. If required by the Government, the Contractor shall utilize Government-purchased spare parts, if awarded the work. Such repairs/replacements will be accomplished by a separate purchase order. However, this exclusion does not apply if the repair is to correct damage caused by Contractor negligence.

7.1.4. Replacement/repair of any electronic or electrical parts must be approved by the COR prior to installation of the part. If the Contractor proceeds to replace any electronic or electrical parts without COR approval, the Contractor shall de-install the parts at no cost to the Government.

7.2 Checklist Approval

The Contractor shall submit to the COR a schedule and description of preventive maintenance tasks which the Contractor plans to provide. The Contractor shall prepare this schedule and task description in a checklist format for the COR's approval prior to contract work commencement.

7.2.1. The Contractor shall provide trained technicians to perform the service at frequencies stated in Exhibit A and on the equipment called out in this SOW. The technician shall sign off on every item of the checklist and leave a copy of this signed checklist with the COR or the COR's designate after the maintenance visit.

7.2.2. It is the responsibility of the Contractor to perform all manufacturers' recommended preventive maintenance as well as preventive maintenance recommended by the manufacture technical manuals for the respective equipment.

8.0 PERSONNEL, TOOLS, CONSUMABLE MATERIALS AND SUPPLIES

The Contractor shall provide trained technicians with the appropriate tools and testing equipment for scheduled maintenance, safety inspection, and safety testing as required by this Contract. The Contractor shall provide all of the necessary materials and supplies to maintain, service, inspect and test all the systems to be maintained.

8.1 Contractor furnished materials will include but not limited to appropriate tools, testing equipment, safety shoes and apparel for technicians, hands, hearing and eye protection, MSDS, cleaning material and oil spill containment kit. Expendable/consumable items (e.g. hoses, belts, oil, chemicals, coolant, filters (Air, Fuel, Oil), generator starting batteries, grease, sealant, thermostat, fuse), will be maintained in the onsite inventory. See 7.1.2.

8.3 Repairs. Repairs are not included in this contract. See Item 7.1.3. Exclusions.

8.4. Disposal of used oil, fuel, battery and other toxic substances. The Contractor is responsible for proper disposal of toxic/hazardous substances. All material shall be disposed of according to Government and Local law. After proper disposal the contractor must show proof of authorized disposal of these toxic/hazardous substances.

9.0. Oil Testing and Analysis. The Contractor shall perform laboratory testing by taking samples and sending them to a certified lab. Testing should follow all manufacturer's recommendations.

10. DELIVERABLES

The following items shall be delivered under this contract:

Description	QTY	Delivery Date	Deliver to
Names, biographic data, police clearance on Contractor personnel (#6.2)	1	5 days after contract award	COR
Certificate of Insurance (#10.2)	1	10 days after contract award	CO
Certification of disposal of toxic chemicals by local authorities (#8.4)	1	After each change	CO
Checklist signed by Contractor's employee (#7.2.1)	1	After completion of each maintenance service	COR
Oil Testing and Analysis (#9.0)	3	After completion of each annual service	COR
Invoice (#15)	1	After completion of each maintenance service	COR

11.0 INSURANCE REQUIREMENTS

11.1 Personal Injury, Property Loss or Damage (Liability). The Contractor assumes absolute responsibility and liability for any and all personal injuries or death and property damage or losses suffered due to negligence of the Contractor's personnel in the performance of this Contract

The Contractor's assumption of absolute liability is independent of any insurance policies.

11.2 Insurance. The Contractor, at its own expense, shall provide and maintain during the entire period of performance of this Contract, whatever insurance is legally necessary. The **Contractor shall carry the following minimum insurance:**

Public Liability Insurance

Bodily Injury	\$XXXXX per occurrence	\$XXXX Cumulative
Property Damage	\$XXXXX per occurrence	\$XXXX Cumulative

Workers' Compensation and Employer's Liability

11.3 Worker's Compensation Insurance. The Contractor agrees to provide all employees with worker's compensation benefits as required under local laws (see FAR 52.228-4 "Worker's Compensation and War-Hazard Insurance Overseas").

12.0 LOCAL LAW REGISTRATION

If the local law or decree requires that one or both parties to the contract register the contract with the designated authorities to insure compliance with this law or decree, the entire burden of this

registration shall rest upon the Contractor. Any local or other taxes which may be assessed against the Contract shall be payable by the Contractor without Government reimbursement.

13.0 QUALITY ASSURANCE PLAN (QAP).

13.1 Plan. This plan is designed to provide an effective surveillance method to promote effective Contractor performance. The QAP provides a method for the Contracting Officer's Representative (COR) to monitor Contractor performance, advise the Contractor of unsatisfactory performance, and notify the Contracting Officer of continued unsatisfactory performance. The Contractor, not the Government, is responsible for management and quality control to meet the terms of the Contract. The role of the Government is to conduct quality assurance to ensure that Contract standards are achieved.

Performance Objective	PWS Para	Performance Threshold
Services. Performs all services set forth in the performance work statement (PWS)	1 thru 12	All required services are performed and no more than one (1) customer complaint is received per month

13.2 Surveillance. The COR will receive and document all complaints from Government personnel regarding the services provided. If appropriate, the COR will send the complaints to the Contractor for corrective action.

13.3 Standard. The performance standard is that the Government receives no more than one (1) customer complaint per month. The COR shall notify the Contracting Officer of the complaints so that the Contracting Officer may take appropriate action to enforce the inspection clause (FAR 52.212-4, Contract Terms and Conditions-Commercial Items), if any of the services exceed the standard.

13.4. Procedures.

13.4.1 If any Government personnel observe unacceptable services, either incomplete work or required services not being performed, they should immediately contact the COR.

13.4.2 The COR will complete appropriate documentation to record the complaint.

13.4.3 If the COR determines the complaint is invalid, the COR will advise the complainant. The COR will retain the annotated copy of the written complaint for his/her files.

13.4.4 If the COR determines the complaint is valid, the COR will inform the Contractor and give the Contractor additional time to correct the defect, if additional time is available. The COR shall determine how much time is reasonable.

13.4.5 The COR shall, as a minimum, orally notify the Contractor of any valid complaints.

13.4.6 If the Contractor disagrees with the complaint after investigation of the site and challenges the validity of the complaint, the Contractor will notify the COR. The COR will review the matter to determine the validity of the complaint.

13.4.7 The COR will consider complaints as resolved unless notified otherwise by the complainant.

13.4.8. Repeat customer complaints are not permitted for any services. If a repeat customer complaint is received for the same deficiency during the service period, the COR will contact the Contracting Officer for appropriate action under the Inspection clause.

14. TRANSITION PLAN/CONTACTS

Within 14 days after contract award, the Contracting Officer may ask the contractor to develop a plan for preparing the contractor to assume all responsibilities for preventive maintenance services. The plan shall establish the projected period for completion of all clearances of contractor personnel, and the projected start date for performance of all services required under this contract. The plan shall assign priority to the selection of all supervisors to be used under the contract.

14.1 On site contact. The following are the designated contact personnel between the US Embassy and the Contractor

-Facility Manager: John Rexford; Cell # 0685 677 420; email: rexfordjf@state.gov

-Technical Specialist: Saulo Kato; Cell # 0685 677 539; email: KatoSE@state.gov

15. SUBMISSION OF INVOICES

The Contractor shall submit an invoice after each preventive maintenance service has been performed. Invoices must be accompanied by a signed copy of the Maintenance Checklist for the work performed including parts replacement and break down calls, if any. No invoice for preventive maintenance services will be considered for payment unless accompanied by the relevant documentation.

The Contractor should expect payment 30 days after completion of service or 30 days after receipt of invoice at the Embassy's payment office, whichever is later. Invoices shall be sent to:

AMERICAN EMBASSY

Attn: Invoice Examiner

Budget and Fiscal Office

P.O. Box 9123

Dar Es Salaam

Email: darbfvouch@state.gov

Exhibit A - - STATEMENT OF WORK

I. GENERAL INFORMATION:

The United States Embassy in Dar Es Salaam requires professional services and contractor cost proposals to perform preventive maintenance services of the facility's emergency generator systems.

II. PROJECT REQUIREMENTS:

DESCRIPTION OF EQUIPMENT *:

**Please see attachment at the end of this sheet for more details*

- CATERPILLER (CAT) generators Model CAT3508B – quantity 2each
- Serial # CNB00300 and CNB00301
- Rating: 800KW; 1000KVA

III. GENERAL REQUIREMENTS:

The contractor will be responsible for labor and materials (see 7.1.2) required to carry out all preventive maintenance as outlined in this SOW. Embassy staff have service manuals for all Generators and ATS's on-site.

IV. SCOPE OF WORK - - GENERATOR PREVENTIVE MAINTENANCE

The contractor shall provide all materials, supervision, labor, tools, and equipment to perform preventive maintenance. All personnel working in the vicinity shall wear and /or use safety protection while work is performed. Any questions or injuries **shall** be brought to the attention of the Post Occupation Safety and Health Officer (POSHO). Material Safety Data Sheets (MSDS) shall be provided by the contractor for all HAZMAT materials. Copies will be provided to the COR for approval.

If any discrepancies are found with the generator systems that are not covered under this scope of work, the contractor must provide the following:

1. Detailed report noting the discrepancy found.
2. Bill of Materials (BOM) to include component name, quantity, part #, and price for any repair material required and material lead time.
3. Price quote for repair labor.

At a minimum, the following work must be completed:

Notes:

- Contractor must submit to the Contracting Officer's Representative (COR) for review, work sheet/checklist that will be used for performing maintenance service.
- COR must immediately be made aware of any condition discovered that could result in equipment failure.
- Test and inspection report shall be submitted to the COR within three days of completing work.
- Laboratory report for all chemicals (oil, coolant or fuel analysis) shall be submitted to the COR.

Maintenance Interval Schedule (Standby Generators)

Notes:

- This is a basic generic list. Manufacturers recommendations should be followed and supersede recommendations in this list. If available, the manufacturer's maintenance schedule can be taken directly from equipment operations and maintenance manual and placed here.
- Generators experiencing periods of prime usage and those operating in severe environments may require more frequent maintenance.
- Before each consecutive interval is performed, all maintenance from the previous intervals must be performed.

A. Semi-Annual Schedule

1. Conduct visual inspection around generator.
 - Check for evidence of leaks, damage, loose or missing hardware.
 - Inspect engine and generator wiring harness for wear and damages.
 - Inspect supports and spring isolators for soundness and stability.
 - Inspect unit for corrosion.
 - Hoses and Clamps - Inspect/Replace if needed.
 - Belts - Inspect/Adjust/Replace if needed.
 - Inspect all fuel, oil, and water piping for secure mounting.
 - Inspect exhaust piping and muffler insulation.
2. Batteries.
 - Battery charger – Inspect operation and clean.
 - Battery electrolyte level and specific gravity – Check and adjust. Add distilled water as needed.
 - Perform battery load test.
 - Clean battery terminals and lugs (apply grease on terminal connections).
3. Fluids and Filters.
 - Cooling System Coolant Level - Check and adjust.
 - Coolant conditioner (DCA/SCA) – Check and adjust to specs.
 - Jacket Water Heater - Check proper operation.
 - Engine Oil Level - Check and add if needed.
 - Fuel/water separators – Drain water.
 - Engine Air Cleaner Service Indicator – Check, clean filter if needed.
4. Generator Room.
 - Fuel tanks – Inspect and treat fuel if needed, check fuel level, drain water and sediment.
 - Automatic fuel system -Check operation and control panel.
 - Space Heater/Room exhaust fan - Check for proper operation.
 - Air intake/exhaust – Ensure nothing obstructs airflow; louvers are free and operate properly.
 - Exhaust condensate trap – drain condensate.
5. Control Panel.
 - Electrical Connections - Check tightness
 - Clean and remove dust from panel.

6. ATS.
 - Clean and remove dust.
 - Inspect seals.
 - Note date of last battery change. (Replace if 2 years or older).
 - Tighten connections.
 - Check for hot spots.
7. Run unit – No load.
 - Run the generator with no load for 15 minutes.
 - Remote Start Panel-Inspect and test operation. Inspect and clean.
 - Check the generator for unusual conditions, such as: excessive vibration, leaks, excessive smoke.
 - Verify all gauges and indicators are normal and functioning properly.
 - Check all indication lights, replace any defective bulbs.
8. Start unit and run under load for 1 hour.
 - Note: Unit should be run under facility load if permissible. If not, unit should be run with a minimum 80% load with load bank.
 - Automatic Start/Stop – Inspect.
 - Check ATS operations and calibrate TDES, TDNE, TDEN, TDEC if necessary. Observe and record retransfer/cool down time.
 - Check automatic open and close shutter-stats and thermatic fans.
 - Generator Set Vibration – Inspect.
 - Read and record all gauges/meters.
 - Record load readings – Voltage, amps, frequency, power factor.
 - Check exhaust for excessive black or white smoke.
 - Check turbocharger for vibrations or any abnormal noise during operation.
 - Check generator bearing for noise and overheating.
 - Check exhaust manifold, muffler, and piping for leaks and secure mountings.
9. Additional.
 - Ensure Generator/ATS is left in proper position for automatic start and transfer.
 - Clean generator and generator room. Wash radiator if necessary.
 - Annotate date, hours and maintenance in Generator log, fill out maintenance checklist and report deficiencies to COR.
 - Perform any additional maintenance tasks as recommended in the manufacture’s operation and maintenance manuals.
 - Submit Service Inspection and Test Report to COR.

B. Annual Schedule

1. Conduct Semi-Annual PM service
2. Engine Air Cleaner Elements – Replace.
3. Engine Crankcase Breather – Clean.
4. Engine Oil Sample - Obtain and perform analysis. Submit report to COR.
5. Engine Oil and Filter – Replace.
6. Fuel Filters and Water Separators – Replace.
7. Obtain fuel sample at day tank and storage tank for analysis.
8. Radiator – Clean (pressure wash).

9. Intake louvers and ducts – Inspect/Clean (pressure wash).
10. Fan Drive Bearing – Lubricate.
11. Magnetic Pickups - Clean/Inspect.
12. Cooling System Coolant Sample - Obtain
13. Cooling System Supplemental Coolant Additive (SCA) - Test/Add
14. Coolant filter – Change if applicable
15. Crankshaft Vibration Damper - Inspect
16. Engine Protective Devices - Check
17. Engine Valve Lash - Inspect/Adjust
18. Turbocharger – Inspect/Check; Check end play and radial clearance on the turbine wheel and shaft.
19. Clean and lubricate fuel pump linkages if applicable.
20. Fan bearing – Inspect/Grease.
21. Clean dust and vacuum all the controls, meters, switching mechanism components, interior buswork, Remote Start control panel, Annunciator and connecting lugs of the ATS.
22. Inspect/Check buswork and supporting hardware for carbon tracking, cracks, corrosion, or any type of deterioration.
23. Check all control wiring and power cables (especially wiring between or near hinged door) for sign of wear and deterioration.
24. Check the cabinet interior for loose hardware – tighten connections.

C. 2 Year Maintenance Schedule:

1. Conduct the Semi-annual and Annual PM Service.
2. Inspect water pump and seals; replace any worn or defective parts.
3. Clean and inspect the oil cooler.
4. Clean and inspect the after cooler.
5. Generator – Check for moisture, dust, oil, grease, and debris on main stator windings, exciter. Clean as needed
6. Generator bearing – Inspect/Grease (or as recommended by manufacturer).
7. Service or replace the batteries in the Digital Module every two years. (as applicable)

D. 3 Year Maintenance Schedule.

1. Cooling System Coolant – Flush system and replace coolant (Note CAT ELC coolant to be replaced every 12,000 hrs or 6 years).
2. Cooling System thermostat – Replace
3. Belts and hoses – Replace
4. Batteries - Replace
5. Generator Main Stator Winding Temperature (if equipped with winding defectors) – Check and record main stator winding temperatures with engine under load. NOTE: Nominal temperature values for stand by units are 180°C (356°F) for the alarm and 205°C (401°F) for the shutdown.
6. Generator Bearing and Bearing Bracket Temperature (If Equipped) – Check and record all bearing bracket temperatures with the engine under a load. NOTE: Nominal temperature values for the bearing bracket are 85°C (185°F) for the alarm and 95°C (203°F) for the shutdown.

