

Minor Service (Quarterly or semi-annual)

Lubrication

1. Check engine crankcase oil level
2. Check for leaks
3. Check hydraulic/mechanical governor oil level

Cooling System

1. Check engine coolant level & temperature.
2. Check for leaks & duct work and fan shroud
3. Inspect coolant connections and hoses (tighten if loose)
4. Check fan/alternator belt tension and wear
5. Check for radiator air restriction
6. Inspect coolant pump
7. Inspect temperature regulator
8. Check water jacket heater(s) for correct operation
9. Check motor operated louvers

Fuel System

1. Check sediment bowls
2. Inspect all fuel system components for evidence of water, sludge and rust
3. Check fuel level in day tank
4. Inspect fuel level floats switches
5. Inspect containment alarm
6. Inspect transfer pump

Air Induction and Exhaust

1. Check air cleaner service indicator & Check dust collector cap
2. Inspect manifold and air piping for leaks
3. Check all intake system hoses and connections
4. Open condensation drains

Electrical System

1. Check battery electrolyte
2. Check battery charging system
3. Inspect alternator drive belt
4. Check shutoff controls
5. Inspect starter
6. Check cold weather starting aids
7. Check condition of batteries and add water as needed
8. Engine safety controls – check gauges and switches
9. Control Panel – vacuum and clean

Switchgear and Emergency Source Feeders

1. Check all control switches in Auto
2. Check automatic transfer switch
3. Check for operational instrumentation

General

1. Visually check engine mounts
2. Visually check complete unit

Major Service (includes steps listed under minor service plus:)

In addition to the quarterly checks, the following additional checks are performed.

1. Change crankcase oil
2. Change oil filter(s)
3. Change fuel filter(s)
4. Lubricate generator bearing – Front
5. Lubricate generator bearing – Rear
6. Change water filter(s)
7. Replace air filter(s) (if part of contract)
8. Sample oil and submit for analysis
9. Clean radiator core (external)
10. Check cooling system inhibitor (DCA)
11. Lubricate moving components when necessary
12. Perform electrical waveform analysis w/Oscilloscope
13. Exercise all circuit protectors
14. Inspect generator/alternator windings
15. Perform resistance evaluation on same
16. Measure hysteresis & response times
17. Measure voltage stability & walk-in
18. Record voltage distortions

NOTE: Storage Battery Systems contracts include coolant condition, fuel filters, oil filters, replacement oil for oil changes, and gaskets or seals made unusable during inspection/PM service visit. Air filters are an adder option to the contract.

Additional Maintenance Recommendations

1. Change coolant and replace batteries every two years.
2. Replace belts and hoses every five years
3. Load bank testing when a unit cannot be loaded to at least 50% of rated capacity for at least two hours annually. Loading the unit will burn off harmful deposits in the combustion chamber, injector nozzles and exhaust system