

SCOPE OF WORK

INFRARED SCAN & ANALYSIS

8X5 ONE DAY / TWO TECHNICIAN

SERVICE SUMMARY

Feature	Detail
On-site Service	Service available during standard work hours, Monday – Friday, 8am-5pm, excluding national holidays, within 150 miles of a Vertiv Services Service city.
Labor	Includes labor and travel during standard work hours, Monday – Friday, 8am-5pm, excluding national holidays, within the 48 contiguous states.
Online Portal	For contract customers, includes access to Vertiv Customer Services Network on-line reporting portal.

SERVICE PERFORMED

Purpose

To identify and deal with emerging problems early enough for maintenance to be performed, reducing emergency repair and maintenance costs, improving overall system reliability, and extending the life of equipment. This scope of work focuses on the electrical equipment on the critical power path from the incoming utility and emergency feed through the UPS system, down to, and including the first distribution system downstream of the UPS system.

Recommended Use

Recommended by ANSI/NFPA 70B Electrical Equipment Maintenance Standard and most insurance companies, annual Infrared Scans (IR Scan) can identify potential problems before an incident or failure occurs, avoiding costly unscheduled downtime and business interruption.

IR Scan specific Customer Responsibilities

1. Prior to scheduled service, customer will provide a full list identifying all locations and equipment to be included in the Infrared Inspection.
2. Provide access to switchgear and critical equipment rooms.

Procedure

1. Service will be provided by two technicians in order safely and effectively conduct both the removal of necessary panel covers for inspection and the infrared scan activity. Visit can occur on premium time during any day or shift. This scope of work includes up to 6 hours of on-site time for the technician. Emerson will not work on any energized equipment where the thermal hazard exceeds 40 cal/cm²
2. Scan each accessible load current carrying piece of equipment using a thermographic camera.
3. Verify actual temperature of problem areas relative to ambient temperatures noted during thermographic survey.
4. Verify proper working clearances in accordance with NEC 110-16 and/or 110-34.
5. Document instantaneous current measurements of all safely accessible problem areas.
6. Document contact resistances by millivolt drop method of safety accessible problem areas.
7. Verify existence of current electrical one-line diagram.
8. Identify that the applicable electrical equipment has the correct electrical safety labeling for:

1. Identifying shock hazards
2. Arc flash hazards
3. Approach boundaries

Deliverables

Results of the Infrared Inspection shall be summarized in a final report containing the following items:

1. Inventory of equipment tested (equipment description, manufacturer, model).
2. Any noted discrepancies.
3. Temperature difference between the area of concern and the reference area.
4. Probable cause of temperature difference.
5. Areas inspected. Identify inaccessible and/or unobservable areas and/or equipment.
6. Load conditions at time of inspection.
7. Photographs and/or thermographs of each deficient area.
8. Recommended action for repair.

Note: Thermographic surveys should be performed during periods of maximum possible loading.

CUSTOMER RESPONSIBILITIES

In order to provide timely, accurate and thorough execution of the services described herein, Vertiv requests the following:

- Point of Contact: Provide an authorized point of contact(s), specific for the scope of work, for scheduling and coordination purposes.
- Scheduling: Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Services Customer Resolution Center at 1-800-543-2378.
- Site Access: Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- Equipment Access: Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- Shutdown: Service may require shutdown of load to ensure electrical connection integrity.
- Notification: If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

TERMS AND CONDITIONS

Subject to all Terms & Conditions as noted in the Vertiv Services Terms & Conditions or the terms of a Master Agreement between the parties, if any, shall apply.

SCOPE OF WORK

UNINTERRUPTIBLE POWER SYSTEMS

ALL 3-PHASE MODELS

ESSENTIAL SERVICE - 2 PM

SERVICE SUMMARY

Feature	Detail
On-Site Service	Includes 1 Annual and 1 Semi-Annual Preventive Maintenance Services, scheduled by the customer between 8am-5pm, Monday-Friday (excluding national holidays).
Response Time	Guaranteed 4-hour on-site emergency response, 7 days/week, 24 hours/day, within 150 miles of a Vertiv's Service City.
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal.
Parts	Includes parts coverage (limits may apply; see Assumptions and Clarifications, as applicable, for more details).
Labor & Travel	Includes 100% labor and travel coverage 7 days/week, 24 hours/day, within the 48 contiguous states and Hawaii.
Service Professional	Performed by Vertiv factory-trained and authorized technician equipped with Vertiv Proprietary tools and software. Vertiv CEs and Vertiv Partners are the only approved OEM service providers for Vertiv products.

VERTIV PROPRIETARY SERVICE TOOLS AND SOFTWARE

Vertiv Customer Engineers (CEs) are the only authorized, factory-trained and OEM-supported service providers for Vertiv equipment with access to Vertiv's proprietary service tools and software to ensure optimal equipment performance.

- Using proprietary software PPvis™, Paramset™, and WinSVT™ CEs apply Vertiv's knowledge base to diagnose, configure and optimize your Vertiv equipment.
- Vertiv is the only authorized source for critical proprietary firmware updates providing your equipment the latest version of operational firmware to ensure equipment is running at optimal performance and efficiency levels.
- Vertiv exclusively enables:
 - Access to OEM engineering support and product enhancements.
 - Optimized methods of procedure for efficient service supported by proprietary documentation.
 - Improved MTBR and MTTR.
 - Root cause forensic analysis.
 - Continual improvements with tested and certified updates for software and hardware improvements throughout the equipment's lifecycle.
 - CEs to be equipped with proprietary service documentation that provides access to the latest method of procedures and event data to return equipment online in the most efficient manner possible.
 - Benchmarking against the entire service population to identify service trends and provide solutions rapidly or before they occur, reducing or eliminating customer events and outages.

- Vertiv Service CEs are trained in NFPA 70E and OSHA best practices, and all processes and procedures strictly comply with NFPA 70E industry standards.

SERVICE PERFORMED

UPS Full Preventive Maintenance Service

Semi-Annual Service

1. Perform temperature check on all breakers, connections, and associated controls. Repair and/or report all high temperature areas.
2. Perform a complete visual inspection of the equipment including subassemblies, wiring harnesses, contacts, cables, and major components.
3. Check air filters for cleanliness. (if applicable)
4. Check rectifier and inverter snubber boards for discoloration.
5. Conduct diagnostic review with proprietary access to internal event logs.
6. Record all voltage and current meter readings on the module control cabinet or the system control cabinet.
7. Measure and record the dc float voltage at the UPS and at the battery
8. Measure and record the ripple voltage and current

Annual Service

1. Check power capacitors for swelling or leaking oil (if applicable).
2. Check for DC capacitor vent caps that have extruded more than 1/8" (if applicable).
3. Measure and record harmonic trap filter currents (if applicable).
4. Check the inverter and rectifier snubbers for burned or broken wires.
5. Check all nuts, bolts, screws, and connectors for tightness and heat discoloration.
6. Check fuses on the DC capacitor deck for continuity (if applicable).
7. With customer approval, perform operational test of the system, including unit transfer and battery discharge.
8. Calibrate and record all electronics to system specifications.
9. Check or perform Engineering Field Change Notices (FCN) as necessary.
10. Measure and record all low-voltage power supply levels.
11. Record phase-to-phase input voltage and currents.
12. Record real and apparent power for each phase.
13. Review system performance with customer to address any questions and to schedule any repairs.

Battery Inspection Service - Performed During the UPS Annual PM Service

1. Check integrity of battery cabinet (if applicable).
2. Perform a visual inspection of the battery, battery cabinet or rack and battery room and note any deficiencies and recommendations.

ASSUMPTIONS AND CLARIFICATIONS

Parts coverage excludes batteries, air filters, proactive full bank capacitor replacement and fan replacement.

Customer should check air filters monthly for cleanliness and replace as necessary.

Maintenance does not include System Control Cabinet, Power Tie, Breaker Cabinets, Load Bus Sync or Maintenance Bypass Cabinets.

The Battery Inspection Service listed above is only a visual inspection and is not intended to replace a full preventive maintenance program for the battery system.

Modular designed UPS systems may have less accessibility to listed “if applicable” checks above due to the design and usage of certain UPS systems.

CUSTOMER RESPONSIBILITIES

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- Scheduling: Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Customer Resolution Center at 1-800-543-2378.
- Site Access: Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- Equipment Access: Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- Shutdown: Service may require shutdown of load to ensure electrical connection integrity.
- Notification: If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

TERMS AND CONDITIONS

Subject to all Terms & Conditions as noted in the Vertiv Terms & Conditions or the terms of a Master Agreement between the parties, if any, shall apply.

SCOPE OF WORK

UNINTERRUPTIBLE POWER SYSTEMS

PERIPHERALS **MAINTENANCE BYPASS CABINET** MODULE BATTERY DISCONNECT, LOAD BUS SYNC, POWER TIE, SLIM LINE DISTRIBUTION CABINET

ESSENTIAL SERVICE - 1 PM

SERVICE SUMMARY

Feature	Detail
On-Site Service	Includes 1 Preventive Maintenance Service, scheduled by the customer between 8am-5pm, Monday-Friday (excluding national holidays).
Response Time	Guaranteed 4-hour on-site emergency response, 7 days/week, 24 hours/day, within 150 miles of a Vertiv Services' Service City.
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal.
Parts	Includes parts coverage (limits may apply; see Assumptions and Clarifications, as applicable, for more details).
Labor & Travel	Includes 100% labor and travel coverage 7 days/week, 24 hours/day, within the 48 contiguous states and Hawaii.
Service Professional	Performed by Vertiv factory trained and authorized technician. Vertiv Services is the OEM service provider for Liebert products.

SERVICE PERFORMED

1. Perform a complete visual inspection of the equipment, including sub-assemblies, wiring harnesses, contacts, cables and major components.
2. Check all mechanical connections for tightness and heat discoloration, making corrections where necessary.
3. Clean any foreign material and dust from internal compartments.
4. Perform a status check of alarm circuits. (If Applicable).
5. Calibration of the equipment to meet manufacturer's specifications (if applicable).
6. Operational checkout of the system to include transfers and proper status indications.
7. Check or perform Engineering Field Change Notices (FCN) as necessary.
8. Return unit to operational service with normal load then measure and verify display indications.

ASSUMPTIONS AND CLARIFICATIONS

Includes 100% parts coverage, excluding circuit breakers and switches.

CUSTOMER RESPONSIBILITIES

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- Scheduling: Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Services Customer Resolution Center at 1-800-543-2378.
- Site Access: Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- Equipment Access: Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- Shutdown: Service may require shutdown of load to ensure electrical connection integrity.
- Notification: If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

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SCOPE OF WORK

POWER CONDITIONING

POWER CENTER (PPC/FPC)

ESSENTIAL SERVICE - 1 PM

SERVICE SUMMARY

Feature	Detail
On-Site Service	Includes 1 Preventive Maintenance Service, scheduled by the customer between 8am-5pm, Monday-Friday (excluding national holidays).
Response Time	Guaranteed 4-hour on-site emergency response, 7 days/week, 24 hours/day, within 150 miles of a Vertiv Services' Service City.
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal.
Parts	Includes parts coverage (limits may apply; see Assumptions and Clarifications, as applicable, for more details).
Labor & Travel	Includes 100% labor and travel coverage 7 days/week, 24 hours/day, within the 48 contiguous states and Hawaii.
Service Professional	Performed by Vertiv factory trained and authorized technician. Vertiv Services is the OEM service provider for Liebert products.

SERVICE PERFORMED

1. Perform a complete visual inspection of the equipment including internal sub-assemblies, wiring harnesses, contactors, cables, major components, and check for proper clearance around the unit.
2. Perform an Infrared Scan (IR Scan) and verify all transformer, terminal block, and ground/neutral bus bar connections for tightness
3. Perform an Infrared Scan (IR Scan) and verify all circuit breakers including the panelboard(s) branch circuits for tightness
4. Perform an Infrared Scan (IR Scan) and verify high and low voltage junction box terminals for tightness (if applicable)
5. Perform an Infrared Scan (IR Scan) and verify all option wiring for tightness. (Spike suppressor, ground fault, phase rotation/loss)
6. Verify system control power fuses. (Equipment MUST be de-energized)
7. Verify grounding electrode conductor and any isolated grounds.
8. Verify EPO lamps are illuminated (if applicable).
9. Perform operational test of the optional local EPO. (Equipment MUST be able to be de-energized)
10. Record all the electrical data via the local display (if applicable). Ensure all values are within the specification.
11. Verify specified restart capabilities (manual or auto-restart).
12. Verify all monitoring options (if applicable) are displaying values within preset parameters.
13. Check or perform Engineering Field Change Notices (FCN) as necessary.
14. Configuration of the LDM/LDMF (for newly installed branch circuit breakers, if applicable).

1. Verify firmware and update as required.
2. Verify the location, alarm set points, number of poles, and address of every newly installed breaker.
3. Verify the CT ratio for every newly installed breaker.
4. Demonstrate use of software tools. (if applicable)
5. (Excludes interoperability with SiteScan and Building Management Systems)
6. Save the configuration file to a laptop as a backup for customer. (If applicable)

ASSUMPTIONS AND CLARIFICATIONS

Parts coverage excludes branch circuit breakers.

CUSTOMER RESPONSIBILITIES

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- **Equipment Access:** Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- **Shutdown:** Service may require shutdown of load to ensure electrical connection integrity.
- **Notification:** If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

TERMS AND CONDITIONS

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SCOPE OF WORK

MODULAR/EXTENDED BATTERY CABINET

NFINITY AND APS

ESSENTIAL SERVICE - 1 PM

SERVICE SUMMARY

Feature	Detail
On-Site Service	Includes 1 Preventive Maintenance Service, scheduled by the customer between 8am-5pm, Monday-Friday (excluding national holidays).
Response Time	Guaranteed 4-hour on-site emergency response, 7 days/week, 24 hours/day, within 150 miles of a Vertiv Services' Service City.
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal.
Parts	Includes parts coverage (limits may apply; see Assumptions and Clarifications, as applicable, for more details).
Labor & Travel	Includes 100% labor and travel coverage 7 days/week, 24 hours/day, within the 48 contiguous states and Hawaii.
Service Professional	Performed by Vertiv factory trained and authorized technician. Vertiv Services is the OEM service provider for Liebert products.

SERVICE PERFORMED

Battery Full Preventive Maintenance Service

1. Perform a temperature check on all breakers, connections, and associated controls. Repair and/or report all high temperature areas.
2. Perform a complete visual inspection of the equipment, including sub-assemblies, wiring harnesses, contacts, cables and major components.
3. Check all nuts, bolts, screws, and connectors for tightness and heat discoloration.
4. Inspect for broken, brittle, damaged, or heat stressed components and cables.
5. Clean any foreign material and dust from internal compartments.
6. Perform a status check of alarm circuits.
7. Perform an operational test of the system including unit transfer to and from battery.
8. Install or perform Engineering Field Modifications including firmware revisions as necessary.
9. Return the system to normal load and verify the output voltage.
10. Review system performance with customer to address any system questions.

ASSUMPTIONS AND CLARIFICATIONS

Parts and labor for KVA or battery upgrades not included. Labor is included if performed during a scheduled PM.

CUSTOMER RESPONSIBILITIES

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- **Scheduling:** Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Services Customer Resolution Center at 1-800-543-2378.
- **Site Access:** Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- **Equipment Access:** Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- **Shutdown:** Service may require shutdown of load to ensure electrical connection integrity.
- **Notification:** If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

TERMS AND CONDITIONS

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SCOPE OF WORK

UNINTERRUPTIBLE POWER SYSTEMS

ALL SINGLE PHASE MODELS (EXCLUDES NFINITY)

ESSENTIAL SERVICE - 1 PM

SERVICE SUMMARY

Feature	Detail
On-Site Service	Includes 1 Preventive Maintenance Service, scheduled by the customer between 8am-5pm, Monday-Friday (excluding national holidays).
Response Time	Guaranteed 4-hour on-site emergency response, 7 days/week, 24 hours/day, within 150 miles of a Vertiv Services' Service City.
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal.
Parts	Includes parts coverage including internal batteries (limits may apply; see Assumptions and Clarifications, as applicable, for more details).
Labor & Travel	Includes 100% labor and travel coverage 7 days/week, 24 hours/day, within the 48 contiguous states and Hawaii.
Service Professional	Performed by Vertiv factory trained and authorized technician. Vertiv Services is the OEM service provider for Liebert products.

SERVICE PERFORMED

UPS Full Preventive Maintenance Service

1. Record the phase to phase and phase to neutral input voltages.
2. Perform a temperature check on all breakers, connections, and associated controls. Repair and/or report all high temperature areas.
3. Perform a complete visual inspection of the equipment, including sub-assemblies, wiring harnesses, contacts, cables and major components.
4. Check all nuts, bolts, screws, and connectors for tightness and heat discoloration.
5. Inspect for broken, brittle, damaged, or heat stressed components and cables.
6. Clean any foreign material and dust from internal compartments.
7. Perform a status check of alarm circuits.
8. Perform an operational test of the system including unit transfer and battery discharge.
9. Check or perform Engineering Field Change Notices (FCN) as necessary.
10. Return the system to normal load and verify the output voltage. Calibrate as necessary.
11. Review system performance with customer to address any system questions.

Battery Full Preventive Maintenance Service

1. Check integrity of battery cabinet.

2. Visually inspect battery system for: swelling, leaks, loose foreign objects, overheated or corroded cables and connectors, loose connections on batteries, and appropriate product labels related to safety and warning hazards.
3. Clean and neutralize cell tops as required.
4. Tighten all battery terminal connections to their proper specifications.
5. Measure and record DC bus ripple voltage.
6. Measure and record total battery float voltage.
7. Record room ambient temperature.

ASSUMPTIONS AND CLARIFICATIONS

Parts coverage excludes air filters, proactive full bank capacitor replacement and fan replacement.

CUSTOMER RESPONSIBILITIES

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- **Point of Contact:** Provide an authorized point of contact(s), specific for the scope of work, for scheduling and coordination purposes.
- **Scheduling:** Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Services Customer Resolution Center at 1-800-543-2378.
- **Site Access:** Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- **Equipment Access:** Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- **Shutdown:** Service may require shutdown of load to ensure electrical connection integrity.
- **Notification:** If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

TERMS AND CONDITIONS

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SCOPE OF WORK

STATIONARY BATTERY SYSTEMS

VRLA (SEALED) BATTERY

ESSENTIAL SERVICE - 4 PM

SERVICE SUMMARY

Feature	Detail
On-Site Service	Includes 1 Preventive Maintenance Service, scheduled by the customer between 8am-5pm, Monday-Friday (excluding national holidays).
Response Time	Guaranteed 4-hour on-site emergency response, 7 days/week, 24 hours/day, within 150 miles of a Vertiv's Service City.
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal.
Internal Battery Coverage	Includes parts, labor, disposal and battery jars as required - up to 10% of the battery jars per year, not accumulated over contract term (limits may apply; see Assumptions and Clarifications, as applicable, for more details).
Labor & Travel	Includes 100% labor and travel coverage 7 days/week, 24 hours/day, within the 48 contiguous states and Hawaii.
Service Professional	Performed by Vertiv factory-trained and authorized technician equipped with Vertiv Proprietary tools and software. Vertiv CEs and Vertiv Partners are the only approved OEM service providers for Vertiv products.
Battery Recycling	Includes battery recycling as required, with documentation meeting EPA requirements.

SERVICE PERFORMED

Quarterly Service

1. Inspect the appearance and cleanliness of the battery and the battery room. Clean normal cell top dirt accumulation (to be done only with battery off line).
2. Measure and record the total battery float voltage and charging current.
3. Measure and record overall AC ripple voltage.
4. Measure and record overall AC ripple current.
5. Visually inspect the jars and covers for cracks and leakage.
6. Visually inspect for evidence of corrosion.
7. Measure and record the ambient temperature.
8. Verify the condition of the ventilation equipment, if applicable.
9. Verify the integrity of the battery rack/cabinet.
10. Randomly measure and record 10% of the cell temperatures.

11. Measure and record the float voltage of all cells.
12. Measure and record all internal Ohmic values.
13. Provide a detailed written report noting any deficiencies and corrective action needed, taken, and/or planned.

Annual and Semi-Annual Service (plus Quarterly Service)

1. Re-tighten all connections to the battery manufacturer's specifications, if applicable. Refer to the manufacturer's literature to determine if re-tightening is required.
2. Measure and record all battery connection Ohmic values, when applicable.
3. Measure and record 100% of the cell temperatures.
4. Minor corrective maintenance performed as required.

ASSUMPTIONS AND CLARIFICATIONS

Does not include labor for full-string replacement.

CUSTOMER RESPONSIBILITIES

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- **Scheduling:** Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Customer Resolution Center at 1-800-543-2378.
- **Site Access:** Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- **Equipment Access:** Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- **Shutdown:** Service may require shutdown of load to ensure electrical connection integrity.
- **Notification:** If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

TERMS AND CONDITIONS

Subject to all Terms & Conditions as noted in the Vertiv Terms & Conditions or the terms of a Master Agreement between the parties, if any, shall apply.

SCOPE OF WORK

STATIONARY BATTERY SYSTEMS

VRLA (SEALED) BATTERY

ESSENTIAL SERVICE - 1 PM

SERVICE SUMMARY

Feature	Detail
On-Site Service	Includes 1 Preventive Maintenance Service, scheduled by the customer between 8am-5pm, Monday-Friday (excluding national holidays).
Response Time	Guaranteed 4-hour on-site emergency response, 7 days/week, 24 hours/day, within 150 miles of a Vertiv's Service City.
Customer Support	Includes access to the Customer Resolution Center (1-800-543-2378) and the Vertiv Customer Services Network Online Internet portal.
Internal Battery Coverage	Includes parts, labor, disposal and battery jars as required - up to 10% of the battery jars per year, not accumulated over contract term (limits may apply; see Assumptions and Clarifications, as applicable, for more details).
Labor & Travel	Includes 100% labor and travel coverage 7 days/week, 24 hours/day, within the 48 contiguous states and Hawaii.
Service Professional	Performed by Vertiv factory-trained and authorized technician equipped with Vertiv Proprietary tools and software. Vertiv CEs and Vertiv Partners are the only approved OEM service providers for Vertiv products.
Battery Recycling	Includes battery recycling as required, with documentation meeting EPA requirements.

SERVICE PERFORMED

PM Service

1. Inspect the appearance and cleanliness of the battery and the battery room. Clean normal cell top dirt accumulation (to be done only with battery off line).
2. Measure and record the total battery float voltage and charging current.
3. Measure and record overall AC ripple voltage.
4. Measure and record overall AC ripple current.
5. Visually inspect the jars and covers for cracks and leakage.
6. Visually inspect for evidence of corrosion.
7. Measure and record the ambient temperature.
8. Verify the condition of the ventilation equipment, if applicable.
9. Verify the integrity of the battery rack/cabinet.
10. Measure and record 100% of the cell temperatures.
11. Measure and record the float voltage of all cells.

12. Measure and record all internal Ohmic values.
13. Measure and record all battery connection Ohmic values, when applicable.
14. Provide a detailed written report noting any deficiencies and corrective action needed, taken, and/or planned.

Conditions for Single Jar Replacement Service for Lead Acid Batteries

1. The Customer is covered by an Essential or Preferred Contract.
2. The battery string is in overall good health as determined by Vertiv; the battery string is not beyond expected service years or has had excessive single jar replacements that would make the string unstable.
3. Up to 10% of defective battery jars may be replaced within a 12-month period as exclusively determined by Vertiv Services.
4. Contracts have no cash value for future years or full string battery replacements. Single jar replacement is limited to batteries in the original string.

ASSUMPTIONS AND CLARIFICATIONS

Does not include labor for full-string replacement.

CUSTOMER RESPONSIBILITIES

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- **Scheduling:** Make dates available for scheduling service. All visits must be requested 10 business days in advance of need by contacting the Vertiv Customer Resolution Center at 1-800-543-2378.
- **Site Access:** Prior to time of scheduled work, provide site access including any customer required escort, security clearance, safety training and badging for Vertiv service personnel.
- **Equipment Access:** Convenient access to the equipment covered by the Scope of Work. Prior to scheduled time of work, notify Vertiv service personnel of any special requirements for equipment access including lifts, ladders, etc.
- **Shutdown:** Service may require shutdown of load to ensure electrical connection integrity.
- **Notification:** If for any reason the work cannot be performed during scheduled time, notify Vertiv service personnel 24-hours prior to scheduled event.

TERMS AND CONDITIONS

Subject to all Terms & Conditions as noted in the Vertiv Terms & Conditions or the terms of a Master Agreement between the parties, if any, shall apply.
