OHMEE

PREVENTIVE MAINTENANCE REPORT

October 4, 2026 · Job 26512 · Contract RB-2021-PM

LOAD

2 HRS

23%

33 kW of 144 kW

BUDGET BY

Q2 2027

from the level of the rest of the set

ACTION REQUIRED

Replace 1

B17, String B: one failed battery

Riverbend Medical Center · Imaging UPS

Toshiba G9000 TYPE T90S3S16KS6XSN2 · S/N G9K-2019-4472 · Basement electrical room

Technician Field tech · Manager Service manager

CUSTOMER

Customer	Riverbend Medical Center
Address	450 Sample Medical Way, Ogden, UT 84401
Site contact	Facilities office · (555) 014-0200
Visit	October 4, 2026
Job / contract	26512 / RB-2021-PM

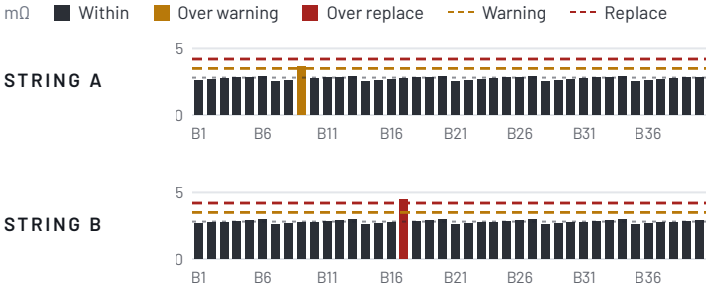
UNIT

Make / model	Toshiba G9000 TYPE T90S3S16KS6XSN2
Serial	G9K-2019-4472
Series	G9000
Rating	160 kVA · 144 kW
Voltage	480 in / 480 out
Installed	12/2021
Manufactured	11/2019
Location	Basement electrical room

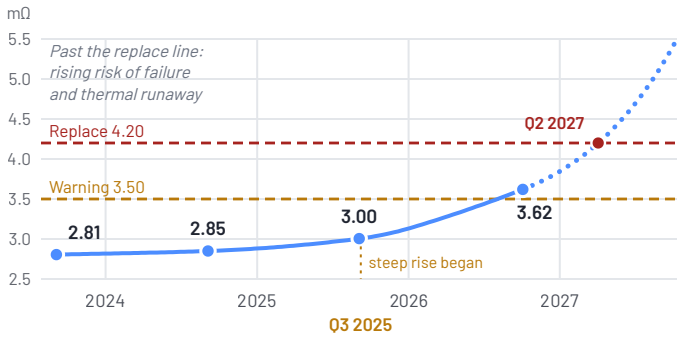
BATTERIES AND SITE

Batteries	EnerSys DataSafe 12HX505-FR
Quantity	80 batteries, 2 strings
Date code	05/2022
Battery monitor	Not recorded
Air filters	(1) 24x30x1
Configuration	3PH 480V IN/OUT / 192A / 0.99PF

IMPEDANCE PER BATTERY



IMPEDANCE TREND, HIGHEST BATTERY OF THE REST OF THE SET



String A, 4 tests since Sep 2023. Impedance is rising faster each year; on this curve it reaches the replace line at the red dot.

BATTERY OUTLOOK

By age alone the set would be due around July 2027; today's readings bring it forward to Q2 2027.

ACTION REQUIRED

Replace String B battery 17.

CUSTOMER RECOMMENDATIONS

String B battery 17 reads 1.6 times its reference, over the replacement line at 1.5 times. String A battery 9 reads 1.3 times its reference, over the warning line at 1.25 times; check it again at the next visit. Plan the battery replacement for Q2 2027.

Full parameters and checklist from page 3.

NOTABLE CHANGES

Since the report of Sep 4, 2025

- Newly over the replace line: B17, String B, 4.47 mΩ, was 3.77, up 19%
- Newly over the warning line: B9, String A, 3.62 mΩ, was 3.00
- Batteries 4 years old, near the end of a 5-year life

INSPECTION

A visual inspection of the UPS and its surrounding area was carried out with the unit online. Environment: Electrical room, temperature regulated. The UPS and the area around it are clean and in good order.

INSPECTION, CONTINUED

The display and the cooling fans are working, and the capacitors show no signs of leaking or swelling. The system was in normal operation.

Continued on page 2.

SERVICE NOTES, CONTINUED FROM PAGE 1

MEASUREMENTS AND ADJUSTMENTS

The input, bypass, output and battery readings were checked and are within normal ranges. The load is about 23 percent of the unit's rating. The estimated battery runtime at this load is about 2h 3m. The air filters were replaced (1 spare left).

BATTERIES

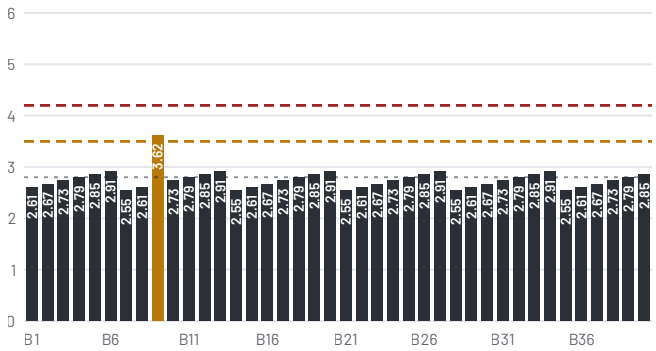
All 80 batteries were tested. One of the 80 batteries, String B battery 17, is above the replacement level; see Action Required. It reads 1.6 times its reference. String A battery 9 is also above the warning level. The batteries showed no leaking, swelling or excessive venting, no terminal corrosion and no ground fault; the battery connections are tight and the battery rack or cabinet is in good condition.

EVENT LOG

No significant events since the last visit. Nothing to do.

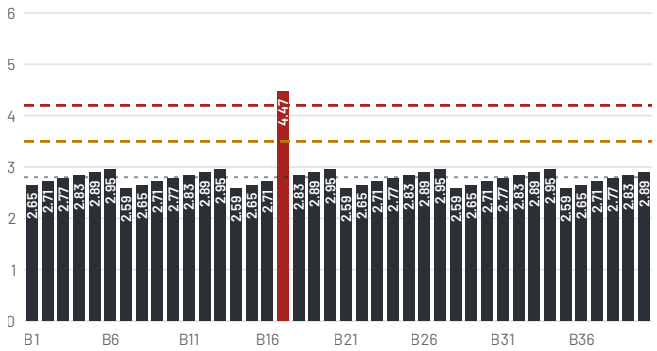
mΩ Within Over warning Over replace Warning Replace

STRING A · IMPEDANCE PER BATTERY



EnerSys DataSafe 12HX505-FR × 40 · reference 2.80 mΩ · date code 05/2022 · voltages 13.42 to 13.54 V · tested October 4, 2026

STRING B · IMPEDANCE PER BATTERY



EnerSys DataSafe 12HX505-FR × 40 · reference 2.80 mΩ · date code 05/2022 · voltages 13.42 to 13.54 V · tested October 4, 2026

BATTERIES TO WATCH

Over the warning line, worst first; change since Sep 2025.

BATTERY	mΩ	× REF	LINE	CHANGE
String B, B17	4.47	1.60	Replace	+0.70
String A, B9	3.62	1.29	Warning	+0.62

REPLACEMENT PLAN

WHEN	WHAT	QUANTITY
Now	The batteries under Action Required	1
By Q2 2027	The rest of the set	79

STRING SUMMARY

STRING	BATTERIES	IMPEDANCE LOW / AVG / HIGH (mΩ)	OVER WARNING	OVER REPLACE	VOLTAGE LOW / HIGH (V)	PREVIOUS HIGH (mΩ)	CHANGE
String A	40	2.55 / 2.75 / 3.62	1	0	13.42 / 13.54	3.00	+0.62
String B	40	2.59 / 2.81 / 4.47	0	1	13.42 / 13.54	3.77	+0.70

TOSHIBA 9000 SYSTEM PARAMETERS

STATUS

Load on INV	**ON**
Battery operation	**OFF**
Load on bypass	**OFF**
Overload	**OFF**
LCD fault	**OFF**
UPS fault	**OFF**

LOGS

Remote / local	**Both**
Time	**Updated**
Date	**Correct**
Last event	**Normal activity**
Battery operations	**18 times**
Battery operation time	**0h 7m 40s**

MAIN

Bypass volts	**484V**
Bypass Hz	**60.0 Hz**
Input volts	**485V**
Input Hz	**60.0 Hz**
Battery volts	**541V**
Battery amps	**0 Amps**
Output volts	**480V**
Output amps	**41 Amps**

CURRENTS

Current A	**40A**
Current A %	**21%**
Current B	**42A**
Current B %	**22%**
Current C	**41A**
Current C %	**21%**

MEASUREMENT

Bypass AB	**484V**
Bypass Hz	**60.0 Hz**
Bypass BC	**483V**
Bypass CA	**485V**
Input AB	**485V**
Input Hz	**60.0 Hz**
Input BC	**483V**
Input CA	**486V**
Battery volts	**541V**
Battery amps	**0 Amps**
Battery remaining	**100%**

OPERATION

DC bus PC	**376V**
DC bus CN	**376V**
Output AB	**480V**
Output Hz	**60.0Hz**
Output BC	**480V**
Output CA	**479V**
Power (kW)	**33kW**
Load %	**23%**
Power factor	**0.99**
Lead / lag	**Lead**

SERVICE CHECKLIST

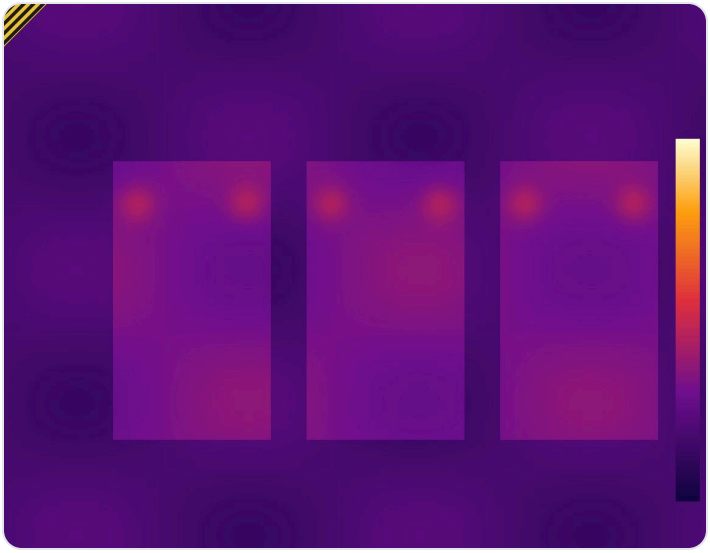
Client concerns or problem history	**None**
Input, output, and bypass breakers labeled	**Yes**
Environment	**Electrical room, temperature regulated.**
System status	**Normal**
Record all operating parameters and statistics	**Yes**
Event history logs	**Normal activity**
Static Switch - System transfer to bypass	**Not bypassed this visit**
High-current power and battery connections	**Good**
Thermal scan	**Not done**
DC BUS capacitors - venting, leakage, fuses, age	**Good**
Rectifier and Inverter Transistors, snubber boards	**Good**
Does transfer and re-transfer work correctly?	**Not transferred this visit**
Inverter and bypass Synchronization	**Synchronized**
Rectifier/Charger	**Good**
Harmonic trap filter currents, choke temperatures	**Good**
Battery connections tight	**Good**
Battery leaking, swelling, excessive venting	**No signs present**
Battery date code or date of installation, age	**05/2022**
Test batteries ...	**IBEX Pro meter.**
Power check - simulated outage	**No outage simulated this visit**
Remote alarms and communication	**Good**
Other tests performed ...	**None**

One-line diagram and bypass procedures posted	**Yes**
Air filters	**Replaced. 1 spare left.**
Panel displays and indicators	**Good**
Calibration if indicated	**N/A**
Remove covers - inspect interior components	**Inspected through covers**
Cables and plugs	**Good**
AC Capacitors - inspect for bulging, leaking, age	**Good**
Internal cleaning	**Not needed.**
System self-tests on re-start ...	**Not restarted this visit**
Power supplies	**Good**
Balanced input current	**Not monitored**
Fans operational	**Yes**
Battery terminal corrosion	**No**
Battery ground fault	**No**
Physical integrity of the battery rack or cabinet	**Good**
Battery charger, ripple current each string	**0A**
Are all system parameters normal?	**Yes**
Update service record sticker	**Yes**

PHOTOS

UPS unit
October 4, 2026

Battery cabinet, open
October 4, 2026



Thermal image
October 4, 2026