FROM DATA TO DECISIONS:

USING VISIONLINK™ FLEET MONITORING TO IMPROVE GENERATOR UPTIME, RELIABILITY, AND MAINTENANCE PLANNING

WHAT YOU'LL LEARN

- How VisionLink™ fleet monitoring can help improve generator uptime and reliability
- How connected asset monitoring supports proactive maintenance planning
- Ways to identify equipment issues earlier through real-time generator insights
- How fleet visibility can reduce unplanned downtime and improve operational confidence
- How Cat® customers use equipment data to make better maintenance decisions

Author: Brett Roberts | Global Digital Commercial Manager, Caterpillar Electric Power

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Overview

Owners of generator sets have access to more operational information than ever before, but information alone doesn't improve reliability. VisionLink™ enables organizations to monitor fleet health, identify potential issues before they become failures, and make more informed maintenance decisions through advanced insights and real-time visibility. This guide explores how VisionLink supports standby and prime power customers by providing earlier awareness into equipment conditions needed to plan maintenance with confidence.

Why Is Asset Visibility More Important Than Ever?

Dependable power has always been the goal. What's recently changed is how organizations achieve it.

Today's connected equipment generates continuous information about asset health, runtime, fuel consumption, and maintenance. Used effectively, that information helps operators recognize developing equipment conditions before reliability is affected.

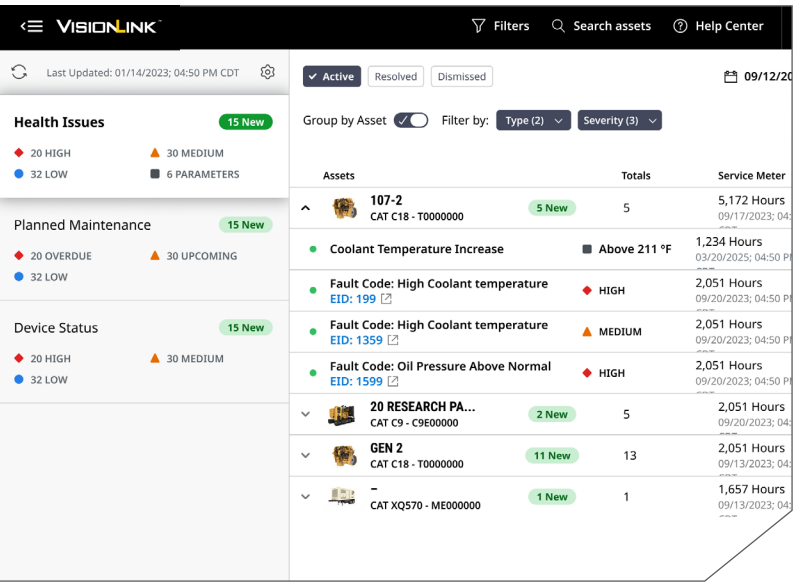
Collecting information is only one part of the equation. The real value comes from understanding which insights matter and how to respond with certainty.

Rising Expectations for Reliability

Whether supporting standby generators or prime power systems, operators are expected to maximize equipment availability while controlling costs. Achieving both goals depends on identifying developing issues early so maintenance teams can respond before small issues become larger operational concerns.

Why Doesn't More Data Always Lead to Better Decisions?

Owners of generator sets collect equipment information from across their operations every day. The real challenge comes from determining which issues require attention first and knowing how to better respond. Many electric power customers, for example, rely on SCADA systems to monitor site operations, but those systems don't always provide the equipment-specific context needed to understand why an alert matters or whether immediate action is required. Without that additional information, maintenance can become reactive, allowing underlying issues to go unnoticed until the system is compromised.



What Does Better Fleet Visibility Look Like?

Rather than replacing existing monitoring systems, VisionLink complements them by bringing together maintenance history, inspections, Cat® dealer support, and proactive notifications in one platform – resulting in earlier equipment awareness and insight into what action should come next.

Technologies like Product Link™ capture equipment data, including asset health, fault codes, runtime, utilization, fuel consumption, and maintenance indicators, while VisionLink brings that information together in a centralized platform. From a single dashboard, operators can quickly see which generators are Ready to Run and which require attention, along with the information needed to respond sooner. Whether managing one generator or an entire fleet, customers gain greater visibility into equipment health and day-to-day operations.

VisionLink supports proactive monitoring with 45 generator parameters; 21 customizable notifications, including while-on and while-off alerts; and 25 customizable reports with four designed specifically for generator set applications.

Prioritizing What Matters Most

An example of how VisionLink helps customers focus on their highest priorities is the Needs Review dashboard, which highlights equipment requiring attention and explains why it matters. Rather than sorting through hundreds of operating parameters, operators can quickly identify priority issues, review equipment conditions, request Cat dealer support, order parts, or begin planning maintenance, all from the same workflow.

VisionLink also combines maintenance history, inspections, oil sample results, and Cat dealer service records to provide a more complete picture of equipment health, helping maintenance teams make better-informed decisions.

For organizations managing multiple locations or mixed fleets, VisionLink extends that visibility beyond generators by providing a single view across Cat equipment and many third-party assets – helping operators monitor critical equipment from a single platform.

"Think of VisionLink like a smart home app for your generators. It shows you what needs attention and helps you know what to do next."

How Does VisionLink Support Better Decisions?

VisionLink in Practice

One example of VisionLink's capabilities involves a customer receiving an alert indicating increasing soot accumulation within a diesel particulate filter (DPF). VisionLink correlated the issue to low engine load, allowing the customer and Cat dealer to increase engine load before soot levels reached a critical threshold. The adjustment prevented an unexpected shutdown and kept the generator operating as intended.

Another example comes from a hospital operating 20 standby generator sets. During a routine exercise cycle, VisionLink alerted operators to increasing oil pressure on one generator. Follow-up testing identified elevated mineral levels in the oil, allowing maintenance to be completed before the issue developed into a failure. While the hospital's SCADA system continued monitoring overall site operations, VisionLink provided the additional equipment insight needed to identify and address the developing condition early.

These examples demonstrate how earlier visibility supports timely maintenance planning, reduces unexpected downtime, and helps keep generators ready.

What Business Value Does VisionLink Deliver?

VisionLink delivers measurable business value by helping organizations gain advance awareness into asset issues, allowing maintenance teams to take a more proactive approach protecting overall asset health.

Reduce Unplanned Downtime

Unexpected downtime can disrupt operations and increase costs. VisionLink helps customers stay ahead of asset needs sooner through notifications and equipment monitoring, giving maintenance teams more time to plan service before failures occur. For standby applications, features such as Ready to Run status and while-off notifications help confirm generators remain available when they're needed most.

Improve Operating Efficiency

Operational visibility also helps organizations optimize equipment utilization. By monitoring equipment utilization and performance trends, operators can discover opportunities to improve efficiency without sacrificing reliability.

For example, one customer determined demand could be met by operating three instead of four prime power generators – while keeping the fourth remaining unit available as backup. The adjustment reduced fuel consumption, lowered maintenance requirements, and improved long-term operating efficiency.

Strengthen Cat® Dealer Collaboration

Shared visibility gives customers and Cat dealers access to the same equipment information, making it easier to identify issues before technician are dispatched. Reviewing fault codes ahead of a service call helps technicians arrive with the appropriate parts, reducing repeat visits.

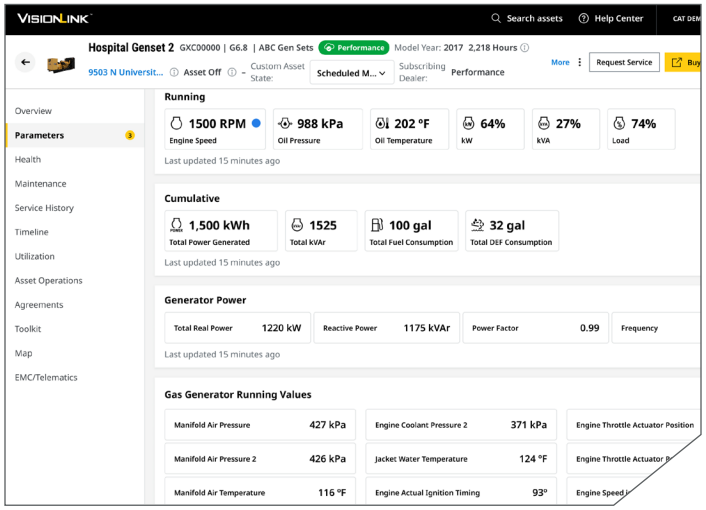
How Does VisionLink Support Different Electric Power Applications

Standby Power

For standby power customers, readiness is everything. VisionLink provides Ready to Run status, alerts operators when a generator changes to Not Ready to Run, and identifies the condition requiring attention. Notifications while the generator is off and confirmation of successful exercise cycles help maintenance teams address potential issues before backup power is needed.

Prime Power

Prime power applications demand continuous performance. VisionLink supports proactive maintenance by monitoring equipment parameters and providing time-series data that helps operators recognize developing issues early, reduce unexpected downtime, and schedule maintenance around operations. For organizations managing multiple locations, VisionLink provides a single view across generators, Cat equipment, and many third-party assets, making it easier to monitor fleet health from one platform.



What Should Organizations Look for in a Fleet Management Platform?

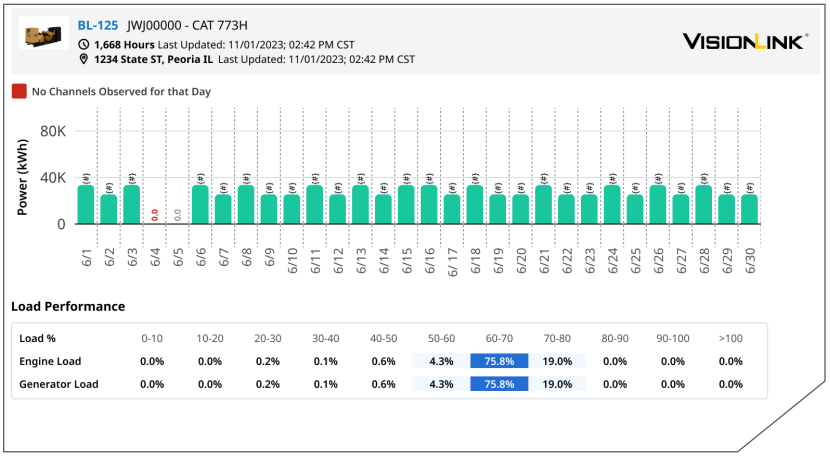
Organizations evaluating a connected asset management solution should look for capabilities that provide centralized fleet visibility, advance notifications, historical equipment information, and stronger collaboration with their Cat dealer. VisionLink brings these capabilities together in a single platform.

What's Next for Connected Platforms?

Connected technologies continue to evolve as predictive analytics, AI-driven insights, and broader site visibility improve maintenance planning, operational readiness, and long-term fleet performance.

Conclusion

Reliable power depends on recognizing developing equipment issues early before they become bigger problems later. VisionLink turns asset information into practical maintenance guidance, so customers stay ahead of equipment issues and keep generators ready. Whether managing one generator or an entire fleet, the goal remains the same: keep power available when it matters most.



Load %	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	>100
Engine Load	0.0%	0.0%	0.2%	0.1%	0.6%	4.3%	75.8%	19.0%	0.0%	0.0%	0.0%
Generator Load	0.0%	0.0%	0.2%	0.1%	0.6%	4.3%	75.8%	19.0%	0.0%	0.0%	0.0%

Related Resources

- VisionLink
- Product Link
- Condition Monitoring Services
- Cat Electric Power Solutions

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