

CASE STUDY:

CATERPILLAR® MARINE'S DATA-DRIVEN EQUIPMENT HEALTH MANAGEMENT (EHM) SERVICE ENHANCES VESSEL UPTIME

OVERVIEW

Analytics and Digital Technologies
Augment the Performance of Cat®-
Powered Tugboats

CUSTOMER

SAAM Towage

LOCATION

Americas

CAT® DEALER

Multiple

PRODUCT

Cat® Marine-Certified Engines
with Global Value Agreement (GVA)

INDUSTRY

Tug

Personalized Fleet Management and Smart Technologies Optimize Engine Performance

Enhancing Engine Reliability and Vessel Availability Across Continents

SAAM Towage is a global leader in towage and maritime services. Operating more than 200 tugboats worldwide, the vessel operator has earned a reputation for reliability and operational excellence based on its safety and environmental performance records.

For global operators like SAAM Towage, engine reliability is critically important as it helps minimize costly unplanned downtime. However, managing maintenance protocols across multiple assets operating in 13 countries introduces significant complexity. The towage operator desired to streamline and align maintenance practices fleetwide to realize predictable results, regardless of port, for improved operational flexibility and costs.

"Our close operating relationship with a dedicated Cat fleet manager and the Cat dealer network allows us to leverage advanced technologies and analytics to maximize uptime, boosting our workboat performance with repeatable results," said Pablo Cáceres, director of sustainability at SAAM Towage.

Enabling Standardization with Smart Solutions

To support SAAM Towage's goals, Caterpillar Marine created a customized Global Value Agreement (GVA) incorporating Cat® Equipment Health Management (EHM) and EHM Plus services to provide condition-based maintenance and continuous engine health monitoring for more than 120 Cat-powered tugboats. EHM and EHM Plus services enable vessel operators to enjoy greater standardization through consistent maintenance protocols, digital monitoring and risk management support.

The tugs received upgraded OEM optimization technologies leveraging real-time OEM analytics. The data-driven approach helps proactively identify fleetwide improvements to prevent asset failures. With EHM and EHM Plus services, downtime can be reduced which enables more tugs to be available for service. This provides a compelling advantage, as increased tug availability positively impacts reliability and revenue.



A FULL VIEW OF FLEET PERFORMANCE

EHM and EHM Plus deliver performance insights that help SAAM Towage enhance fleet utilization through improved maintenance and repair planning. Parts procurement is also optimized using this customized, extended service approach. This enables the towage operator to lower CapEx and failure risk over the entire service life of its vessels.

Digital connectivity provided by EHM Plus simplifies maintenance scheduling, as vessel data ensures overhauls occur at the most optimal times. Optimizing overhaul planning helps SAAM Towage extend fleet engine life and better assess individual engine performance.



**"UTILIZING CATERPILLAR'S
EHM AND EHM PLUS SERVICES HAS
HELPED US STANDARDIZE OUR MAINTENANCE
PROCESSES AND ACHIEVE OUR GOAL OF
IMPROVING OPERATIONAL EFFICIENCIES ACROSS
MULTIPLE REGIONS, ELIMINATING HUNDREDS OF HOURS
OF DOWNTIME AS WELL AS PREVENTING MILLIONS
OF DOLLARS IN LOST REVENUE."**

— ALENTUE POMPEI,
FLEET AND SUPPLY CHAIN
DIRECTOR FOR SAAM TOWAGE

"Tug is one of the most demanding industries for marine engines, requiring fast response and quick load times during critical operations," said Steven Tibbetts, global services director for Caterpillar Marine Power Systems. "Our dependable dealer network offers certified technicians and trusted support that allows vessel operators to continually enhance their high-performance marine engines, promoting greater competitiveness while optimizing total cost of ownership."

MAINTENANCE EFFICIENCIES AT SCALE

As SAAM Towage works with multiple Cat dealers globally through the GVA, access to a Caterpillar Marine fleet manager is invaluable. The fleet manager, based in Chile, underpins the EHM and EHM Plus services offered and closely monitors engine health and performance. This helps SAAM Towage achieve its standardization goal across multiple continents.

With a dedicated local fleet manager providing centralized coordination with multiple Cat dealers, the fleet optimization program is changing how SAAM Towage advances the safety, reliability and consistency of its tug operations. Proactive monitoring enables the towage operator's fleet to be optimized at scale to maximize uptime – and project opportunities.