Wabtec
CORPORATION

RAILCAR
TELEMATICS

Enabling smart connected assets.

TRANSFORMING RAILCAR ASSETS

Today, there is no real-time visibility into the status and health of over 90% of the estimated 5.2 million railcars worldwide. Equipping these freight cars with telematics, GPS, and sensor technologies enables customers to capture the hidden information and turn it into actionable data that is transformative to the customer experience and supply chain efficiency.

Railcar Telematics builds on Wabtec's rich history serving the freight car markets with next generation solutions. The solution enables customers to capture the hidden information inside a railcar and drive outcomes that matter. With Wabtec's new solution, rail shippers and operators can turn cargo into smart connected assets that communicate their location, health, and status. The result: freight visibility, increased safety of rail assets, and new levels of operational efficiency.

BENEFITS

Asset Visibility:
Track and trace your freight and rail assets. Gain access to first and last mile data.

Increase Safety:
Use health data to improve railcar maintenance and ensure reliability and safety.

Customer Satisfaction:
Enhance customer communications through informative insights and status notifications.

Productivity & Operational Efficiency:
Learn how railcar and tank container assets are being utilized to drive operational improvements.

Preserve Product Quality:
Monitor the required temperature and pressure levels of tank containers to ensure that cargo reaches its destination in optimal condition.
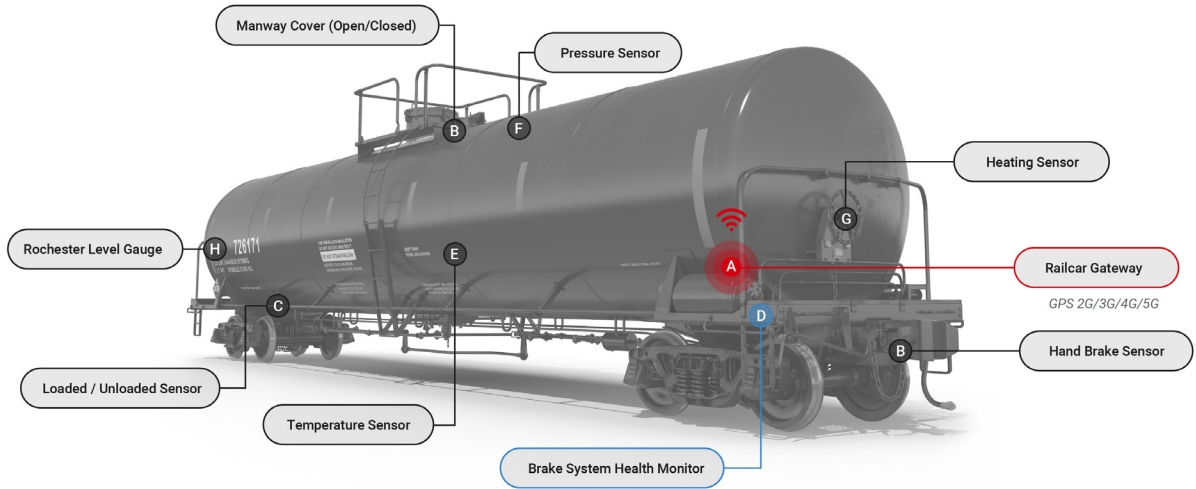
SENSOR EXAMPLES

Brake System Health Monitor

Gateway

Heating Sensor

Load Sensor

Rochester Level sensor

Temperature Sensor

Heating & Cooling Terminal

Pressure Sensor

Hatch/Manlid/Valve Open/Close + Handbrake On/Off Sensor

SENSORS & VALUE DELIVERED

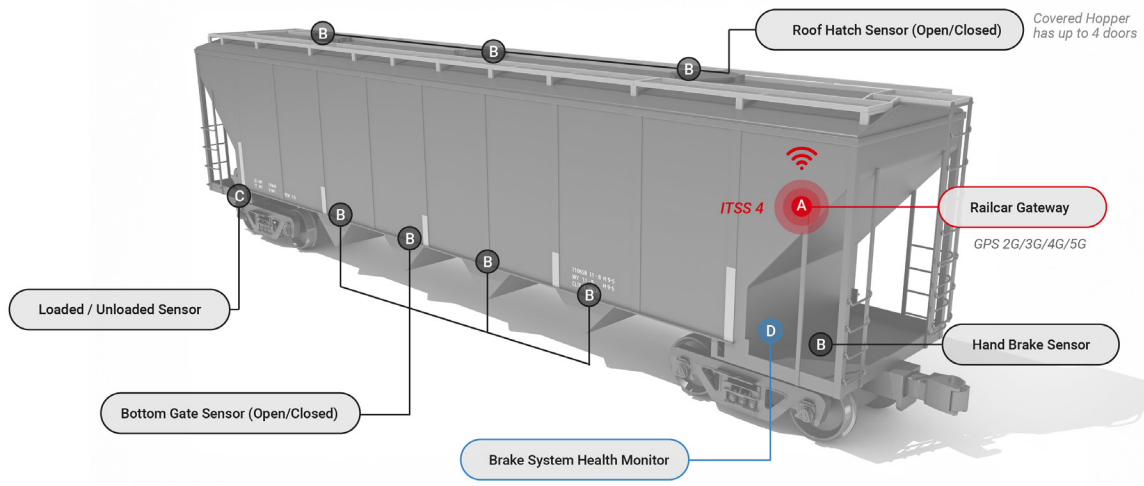| Name	Description	Value Delivered			
		Visibility	Safety	Equipment Utilization	Service Excellence
Communication & Location Terminal	Location status, communication of sensor data, and data transfer	●	●	●	●
Bridge	Location status, communication of sensor data, and data transfer	●	●	●	●
Open/Close Sensor	Determines if hatch, manlid, or valve is open or closed		●		●
Handbrake Sensor	Status of the handbrake		●	●	
Door Sensor	Measures if a railcar door is open or closed		●		
Brake Sensor	Status of the brake-rod		●		
Brake System Health Monitor	Operational condition and status of the brake system		●	●	
Load/Unload Sensor	Load status of the railcar			●	
Pressure Sensor	Pressure inside the tank		●		●
Temperature Sensor	Temperature of the tank contents		●		●
Heating Sensor	Temperature of an external heat source to warm the cargo				●
Heating & Cooling Terminal	Provides control of heating and cooling systems for the cargo				●

Manway Cover (Open/Closed) — B
Pressure Sensor — F
Heating Sensor — G
Rochester Level Gauge — H
Railcar Gateway — A
GPS 2G/3G/4G/5G
Loaded / Unloaded Sensor — C
Temperature Sensor — E
Hand Brake Sensor — B
Brake System Health Monitor — D

Sensor Types
A B C D E F G H

COVERED HOPPER

Roof Hatch Sensor (Open/Closed) — B
Covered Hopper has up to 4 doors
ITSS 4 — Railcar Gateway — A
GPS 2G/3G/4G/5G
Loaded / Unloaded Sensor — C
Hand Brake Sensor — B
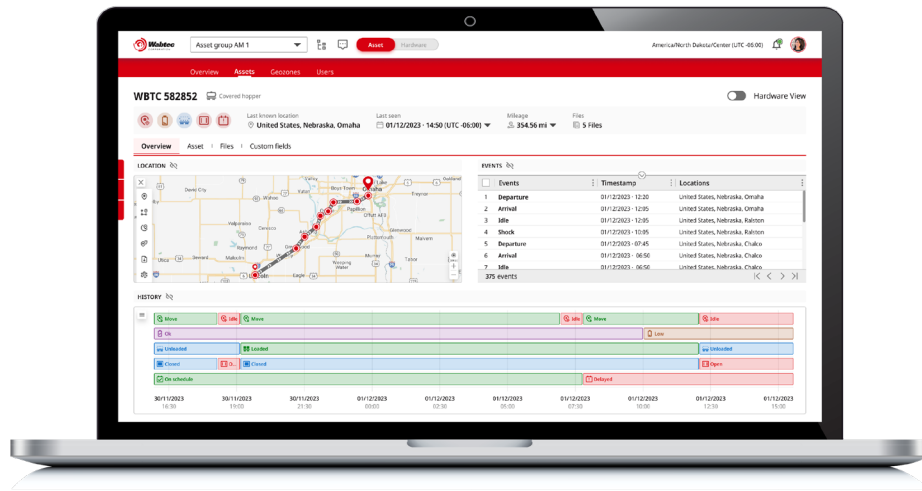Bottom Gate Sensor (Open/Closed) — B
Brake System Health Monitor — D

Sensor Types
A B C D E F G H

WEB PLATFORM

Powerful digital tool for cargo and fleet management.
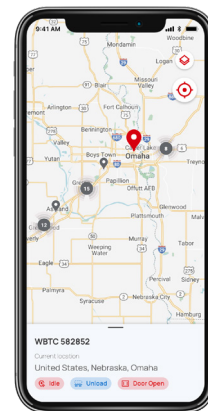

PLATFORM FEATURES

- **Cargo Monitoring Asset View**: Actively monitor freight in transit; view historical data.
- **Powerful Table Options**: for easy data selection, analysis and management.
- **Analytics Dashboard**: a customizable overview of assets and their status.
- **Asset Group Navigator**: Easily structure your assets/fleets; create & control business groups, assets, geozones & products.
- **Access Control**: provide the right stakeholders access to the right data.
- **Business Attributes**: add your own fields to asset groups, assets, geozones or products.
- **Business Status**: apply your own set of rules to trigger business decisions.
- **Integration with 3rd Party TMS**: Use telematics data to compare to plan.

PLATFORM FEATURES (CONT'D)

- **Event Notifications**: Can be shown on the platform, sent to e-mail addresses, and sent to phones via a text message.
- **Upload Files**: Technical documents, maintenance reports, and custom documents are directly available when you're handling assets.

MOBILE FLEETS APPLICATION

Provides a lightweight alternative to the Web Platform for mobile devices; supports IOS/Android.

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