



TRANS-GLOBAL SOLUTIONS, INC.

Locomotive Technology



BEAUMONT OFFICE

1735 West Cardinal Drive
Beaumont, Texas 77705
Office: 409-727-4801 | Fax: 409-840-9376
sales@tgsgroup.com

HOUSTON AREA OFFICE

1033 Industrial Rd
Baytown, TX 77523
Office: 713-453-0341 | Fax: 713-453-2756
sales@tgsgroup.com

TGS LOCOMOTIVE TECHNOLOGY

Our locomotives feature a suite of integrated technologies designed to enhance reliability, safety and operational efficiency—all working together to detect train handling in real time. From intelligent diagnostics to automated systems and real-time monitoring, these innovations work together to reduce downtime, optimize fuel use and support proactive maintenance. **This data-driven insight not only identifies operator issues but also provides actionable feedback to support effective crew coaching and long-term performance.**

- A. Locomotive Control System
- B. IOT Software Platform
- C. Event Recorders
- D. Hot Start
- E. Auto Engine Start/Stop
- F. On-board GPS
- G. On-board Diagnostics
- H. Enhanced Propulsion
- I. Dual Liquid Engine Heater
- J. Forward and Rear Facing Cameras
- K. Cell Phone Use Detection
- L. Remote Monitoring



TGS LOCOMOTIVE TECHNOLOGY

A. LOCOMOTIVE CONTROL SYSTEM

Benefits

- Propulsion Efficiency - Haul more with Less
- Adhesion Control
- Reliability and Availability - Alternator and Motor Protection
- Fuel/Emissions and Cost Reductions
- On-board Diagnostics
- Remote Monitoring

ROI

- ▶ 90% reduction in traction motor replacements - less down time
- ▶ 20% to 40% adhesion increase - reduces track and wheel damage
- ▶ 50% in service locomotives can reduce fuel cost up to \$16k a year

B. IOT SOFTWARE PLATFORM

Benefits

- Fuel/Emissions reduction
- Remote Monitoring
- Excess Idle Alerts
- Powerful Evidence for faster incident investigations
- Reduces Overspeed Violations
- Identify locations where track is failing
- Alerts when crews are using cell phones

ROI

- ▶ Excess Idle Alerts can reduce fuel consumption by up to 25%
- ▶ On-board track sensors identify condition and geometry issues and prevent costly derailments
- ▶ Improves adherence to safety and operating rules, decreasing risk of costly incidents

C. EVENT RECORDERS

Benefits

- Ensure safe train operations
- Records data for incident investigations, train handling studies, and fuel conservation

ROI

- ▶ Ensures safe train operations and identifies network and mechanical failures preventing future incidents

D. HOT START

Benefits

- Idle reduction
- Fuel Savings
- Reduces engine hours

ROI

- ▶ Idle reduction up to 24% in cold weather
- ▶ Reduced Engine wear produces lower maintenance costs

E. AUTO ENGINE START STOP

Benefits

- Idle reduction
- Fuel Savings
- Fully automated option

ROI

- ▶ Idle reduction reduces fuel consumption by 5,000 to 8,000 gallons annually

F. ON-BOARD GPS

Benefits

- Location Tracking
- Historical speed and location data

G. CAMERAS

Benefits

- Speed up incident investigation by syncing video with event recorder data

ROI

- ▶ Speeds up investigation time and alleviates the manual burden on operations and management