





## PROGRESS RAIL CURRENT TECHNOLOGY LEADERSHIP

- EPA Tier 4 Diesel Locomotive
- EGR and SCR Technologies
- Tier 4 Locomotive Repowers
- Lithium-Ion Battery Locomotives
- TALOS® Train Automation
- Machine Learning applied to all controllers
- Energy Recovery & Fuel Savings
- Energy Optimization
- Zero Idle Solution (LiON)
- Inverter Driven Cooling Fans
- PR Uptime™ Suite
- Biofuels + Renewable Diesel

## PROGRESS RAIL CUSTOMER SUCCESS STORIES

### Norfolk Southern, Chicago & Atlanta

- Progress Rail has repowered 50 NS locomotives since 2008
- Lower Emissions
- Fuel Savings
- Operating Efficiencies
- Each 710ECO™ unit can replace two older, less-efficient locomotives

### South American Mining Company, Vale

- EMD® Joule Battery Electric Locomotive
- Zero-Emission
- 3000 HP Battery Locomotive
- 120-ton Locomotive
- Currently pulling 9,000-ton trains
- 3-5 trains a day recharging every other day
- Super-silent cab
- Testing complete and locomotive is operating in revenue service

### Pacific Harbor Line, California

- New EMD® Joule battery electric locomotive for a demonstration project operating in the ports of Los Angeles and Long Beach California
- This six-axle locomotive will feature the latest lithium-ion battery technology and battery management system, including AC traction and state-of-the-art electronics.
- The zero-emission, zero-idle and low-noise EMD® Joule locomotive is capable of 3,200 horsepower in this application and will be rigorously tested in all types of service at Pacific Harbor Line.

