

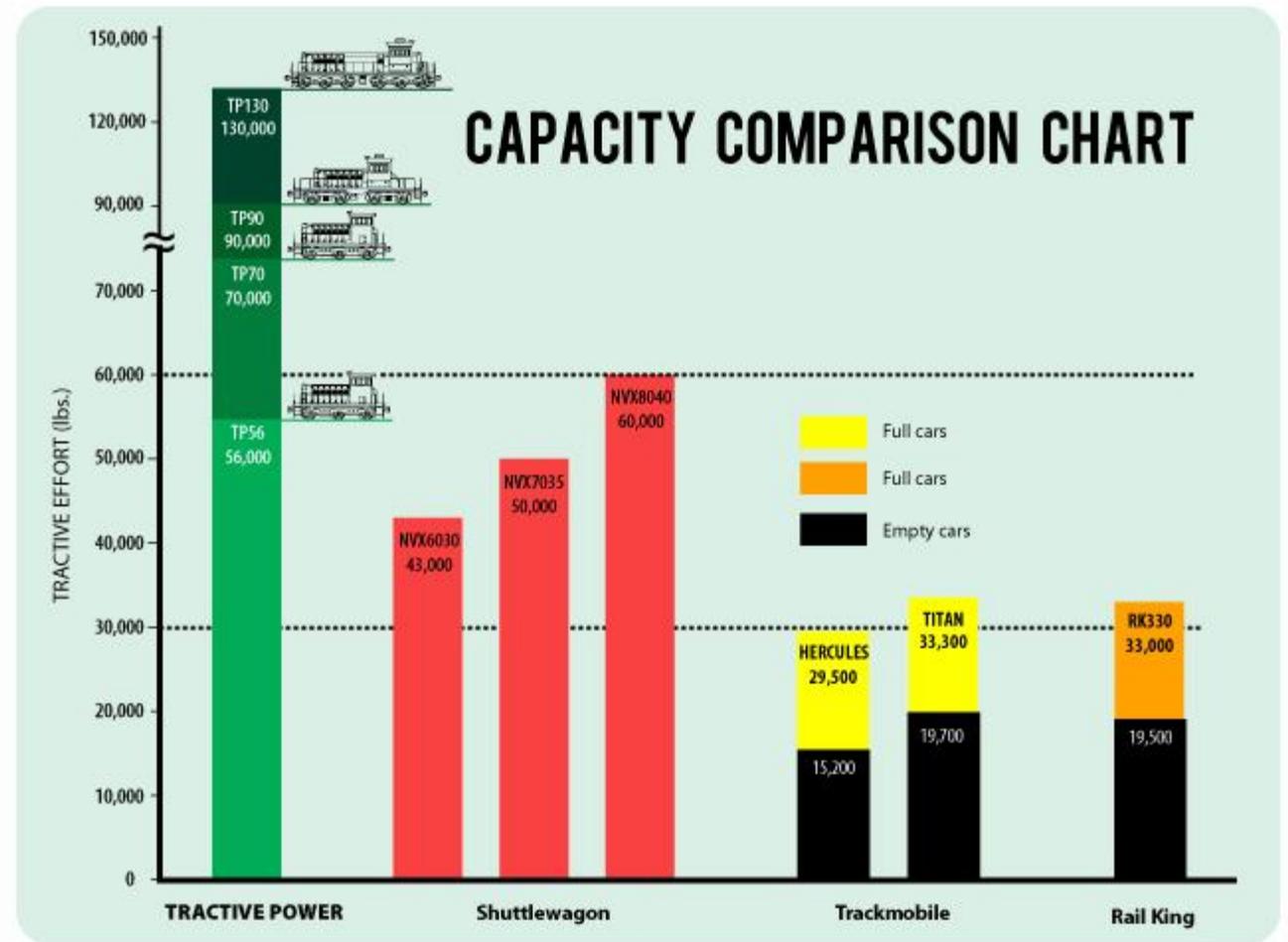
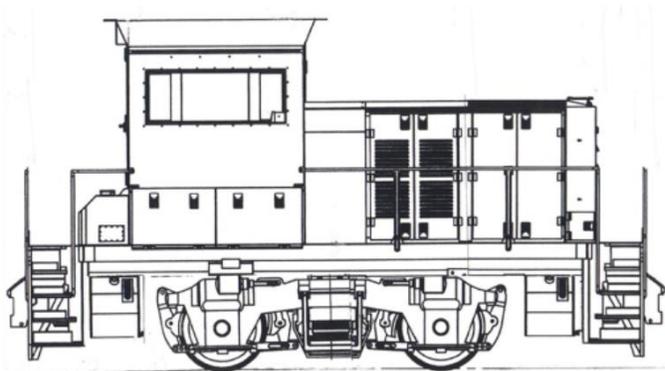
The Green Goats

- 55 GG20B's put into service between 2004 and 2008
- Lead Acid Batteries
- 2000HP Tractive Effort
- 90 kW Generator
- NOT a plug in hybrid



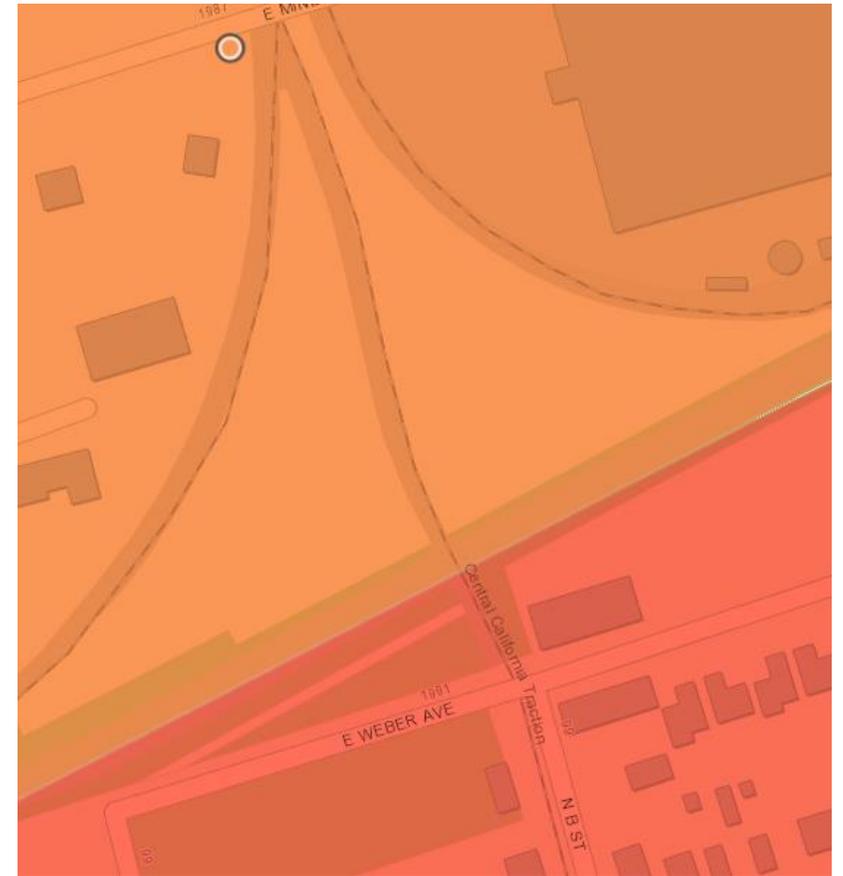
Industrial Switching Locomotives

- Locomotives for moving railcars at industrial sites for filling and emptying.
- High Tractive Effort required, typically low power and energy consumption



Tractive Power's First Demo Site

- Shop Switcher for Diesel Motive
 - Located in Stockton, CA
 - CalEnviroScreen 4.0 Score of 87/97
 - Replacing Un-Regulated GP9

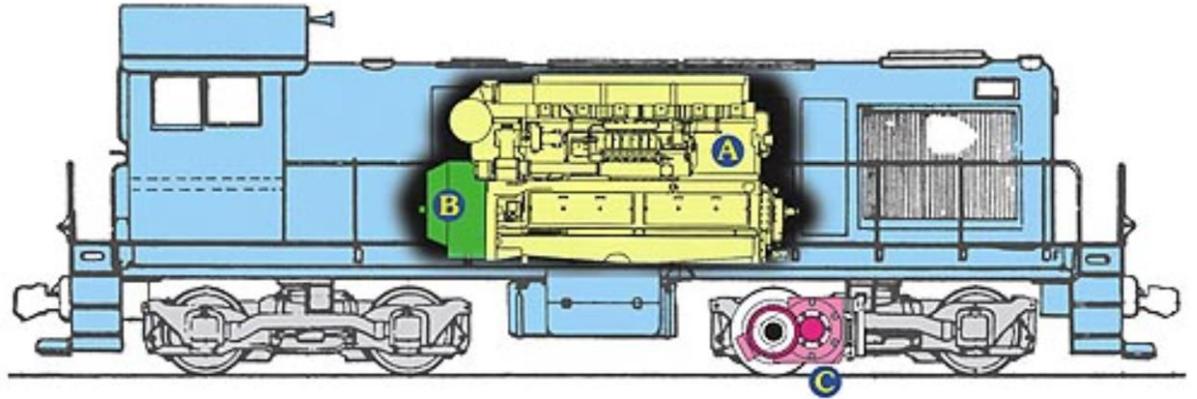


Project Team

- Tractive Power - Industrial Switcher Manufacturer
- Rail Propulsion Systems - Battery and BMS system
- Diesel Motive
 - Location for Demo use of Z.E. Switcher
 - Maintenance Provider for Northern California
- Pacific West Systems
 - Leasing agent for California
 - Maintenance provider in Southern California

Market Readiness of Battery Locomotives

25,000 Diesel ELECTRIC
Locomotives in North America



Traction motor Combo's
Interchangeable since 1950's



Yard Switching Locomotives



Initial use of in-motion wireless charging in Yard Switching Locomotive application

- Use of Smaller Batteries
- No Scheduled Charging Breaks
- Truly Better than Diesel

Zero Emissions Yard Switcher



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