



Making Electrification Work: A Yard Truck Case Study

Transportation & Innovation Expo



ABOUT ORANGE EV

ORANGE EV DESIGNS AND DELIVERS PURE ELECTRIC INDUSTRIAL STRENGTH VEHICLES

The T-Series: Meeting the harsh demands of industrial markets while catalyzing the heavy-duty electric truck industry.

- **New:** Built to site specifications with all new components
- **Remanufactured:** Giving new life to used trucks by reusing durable elements. A new truck you already know.

The Industry Leader:

- First commercially deployed (i.e. with paying customers)
- First approved for sale in California and across the U.S.
- First and only with real world data proving operational and financial claims (via onboard telematics on deployed fleet)
- Still the only Class 8 electric truck with fleet re-orders



The terminal truck is known by many names including:

- Hostler
- Spotter
- Shifter
- Yard dog
- Buggy
- Jockey
- Tractor
- UTR
- Stevedoring tractor
- Yard truck
- Goat
- Mule
- Shunter
- Tug
- Shag
- Switcher
- Trailer mover
- and more...

Why Electric with Orange EV?

Below are examples of Orange EV fleets, just a few of those stating on-record that Orange EV trucks are higher quality and more reliably doing the job in place of the diesel trucks they replaced. These include global leaders as well as smaller, regional, and government fleets.



RMS™
Rail Management Services



Deployed Industry Segments

- Rail Intermodal
- Seaport
- Parcel
- Global Retail Distribution
- LTL Freight
- 3PL firms
- Manufacturing
- Spotting
- Waste Mgt
- Warehouse/DCs

In use with top ramp operators and railroads

Supporting California Ports of LA, Long Beach and Oakland

The sorting operations of global brand leaders

The big boxes

The largest, busiest break-bulk sites

Global leaders and regional firms alike

Global and regional consumer brand leaders and commercial brands

Innovative firms electrifying and optimizing yard management

Municipal waste transfer sites

McDonald's distribution network (NALC) as well as national and regional logistics firms

ORANGE EV TRUCKS: OWNED AND OPERATED ACROSS SITES AND FLEET TYPES

BUILT TO SITE SPECIFICATIONS

Single axle (4x2) with GCWR of 81k LB up to 25 MPH. Major configurations include:

Truck:

- New
- Remanufactured

Battery:

- Standard 80 kWh
- Extended 160 kWh

Charging:

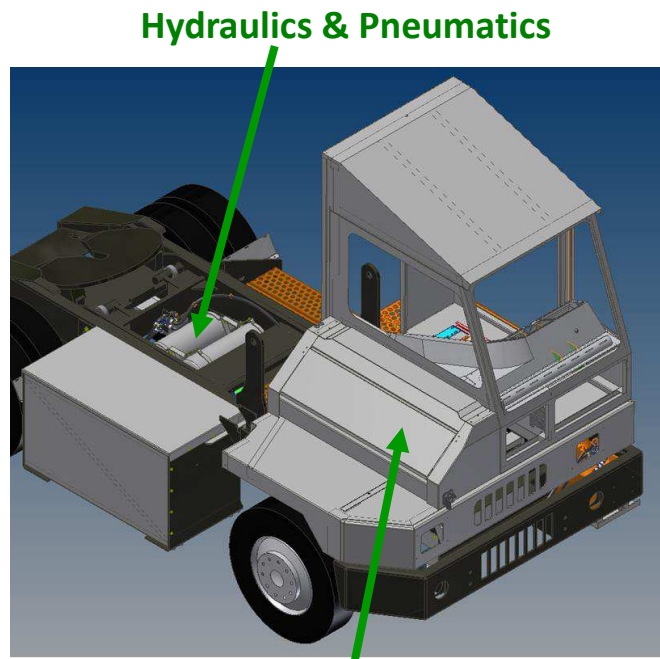
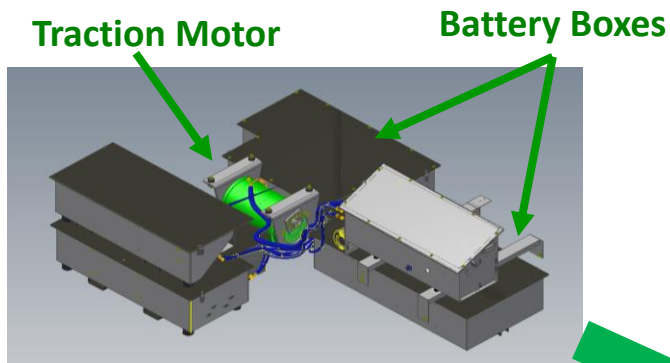
- Standard 15-22 kW per hour
- Fast 80 kW per hour

DOT:

- Off-road
- On-road (DOT compliant)



WITH MUCH LESS TO MAINTAIN AND REPAIR



Eliminated: Engine, transmission, diesel fueling, emission control

Replaced by: Mostly sealed, maintenance-free components. Single battery pack and brushless induction motors.

Operation: Much like before

Vehicle Control Box (BMS, Controllers)

CHARGING SOLUTIONS TO MEET THE DUTY CYCLE

Easier than fleets think. “Standard” charging is most common. Can fully charge in under two hours via fast charging. “Top up” by **opportunity charging**, plugging in during existing downtime (breaks, lunch, shift changes, waiting for moves, etc.).



Images show the Extended Duty Truck using Standard Offboard Charging. Cabinet can be installed inside or outside

Standard Charging

- Offboard, standard charging cabinet
- 440-480 VAC, Up to 22 kW charging capacity

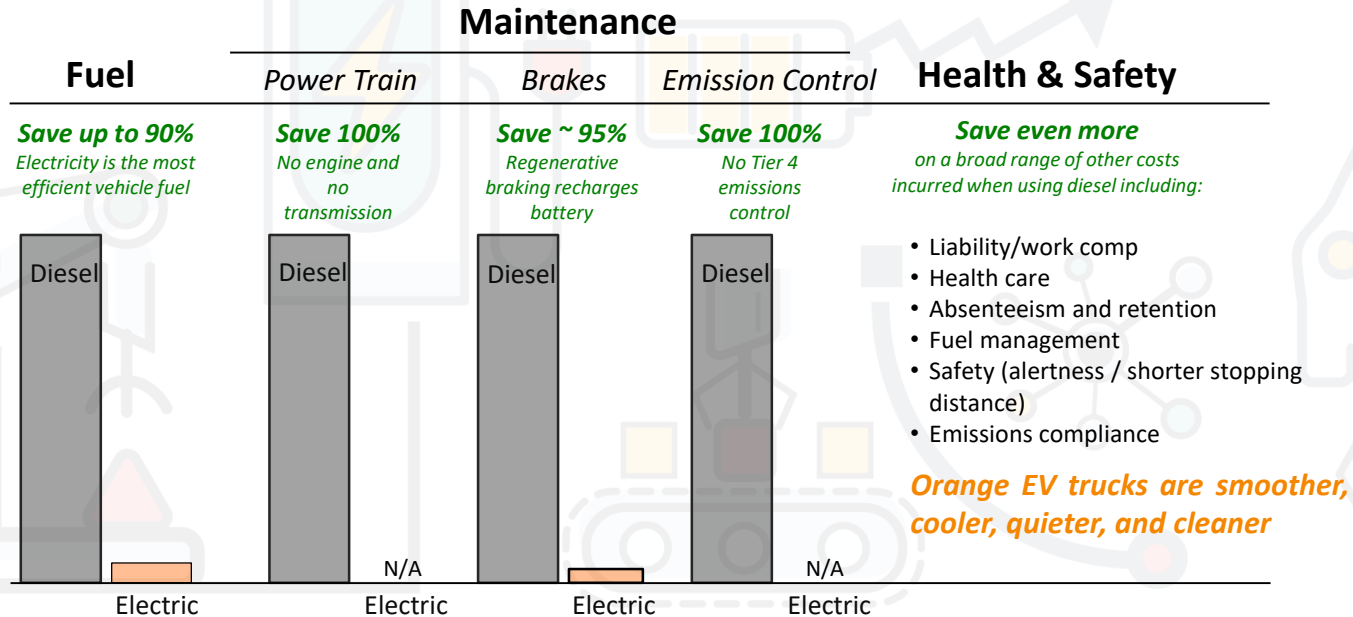
Fast Charging

- Offboard, fast charging cabinet
- 440-480 VAC, Up to 80 kW charging capacity

NO BATTERY SWAP OR MAINTENANCE – JUST PLUG IN THE TRUCKS

SAVE MONEY

Going electric wins the support of local communities and green customers while reducing costs.



SIGNIFICANTLY LOWER TOTAL COST OF OWNERSHIP

PROVEN AND PREFERRED

FLEETS CHOOSE ORANGE EV



FLEET AND MAINTENANCE MANAGERS, SUSTAINABILITY TEAMS, AND COST-MINDED EXECUTIVES CHOOSE ORANGE EV'S PURE ELECTRIC TERMINAL TRUCK SOLUTION TO REDUCE COSTS, IMPROVE PERFORMANCE AND SAFETY, WHILE *ELIMINATING EMISSIONS*.



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