

# TIMBERLAND UNDERGROUND VEHICLES **GO DEEP** FOR SAFETY WITH **BATTERY-ELECTRIC POWER**



**A new generation of BEV technology  
is leading mine utility fleets to:**

- Emissions-free safety for mine personnel and environment
- Lower costs for mine infrastructure
- Simplified utility fleet maintenance



**CLEAN, SAFE BATTERY-ELECTRIC POWER**  
NOW AVAILABLE FOR ALL \*MINEJACK® BASED UTILITY VEHICLES

\*Effective January 2, 2020, Marcotte Mining Machinery Services, Inc. has amalgamated with Timberland Equipment Limited.

**TE** **TIMBERLAND  
EQUIPMENT  
LIMITED**

# Battery-Electric Vehicle (BEV) technology comes to mine utility fleets

As mines go deeper and needs heighten for safe underground environments, Timberland Equipment delivers a full fleet of solutions for all types of underground utility vehicles:

## A "True" Battery Powertrain For Underground Applications

- Lithium Titanate 600 V batteries for efficient reliable service, even in cold climates
- Fast charging: as little as 15 minutes to charge; est. 20,000 life cycles
- Proven technology in over 1000 mine applications worldwide
- Primary drive using a permanent magnet AC motor for highest efficiency
- Industry-proven drive inverter for primary drive motor; compact, water-cooled design.
- Secondary inverter for auxiliary motors; drives hydraulic and cooling pumps

## Safer, Cleaner Underground Environments

- Emissions-free electric power for improved underground air quality
- Quiet operation for improved health and communications
- No fuel stations required
- New RAM40 vehicle profiles provide enhanced lines of sight
- Articulated steering for tight turn radius; safer, quicker maneuvering in confined areas

## Reduced Mine Operating Costs

- Standardized powertrain design reduces parts and streamlines fleet maintenance
- Battery power generates less wear on the vehicle; extends service intervals and total lifecycle
- Reduced cooling and ventilation loads allow savings on infrastructure installation and maintenance

## RAM40 UTILITY PLATFORM

RAM40 is Timberland's new generation of multi-purpose utility carriers designed specifically for underground mine applications. The standard front carrier contains all the powertrain components, while the platform behind the pivot point adapts readily to all mobile utility equipment, including:

- Scissor Lift Platform with handrails and Scissor Lift to variable heights
- Shotcrete Hauler with reversible drum rotation
- Crane and Flatbeds
- Personnel Carriers
- Fuel and Lube Carriers and systems
- Customized Equipment and applications

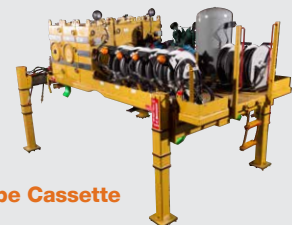
## RAMCASSETTE SYSTEM OPTIONS

Timberland's cassette carrier combines a versatile handling system using clean, efficient battery-electric power. Removable cassettes with 30" jacks provide 6,000 lb. capacity for a full range of optional cassette packages:

- Scissor Lift Cassette
- Anfo Cassette
- Wet Hauler Cassette
- Crane Cassette
- Flatbed Cassette
- Fanhandler Cassette
- Personnel Cassette
- Fuel Cassette



Anfo Cassette



Fuel/Lube Cassette



Scissor Lift Cassette

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