MECHANICAL DEPARTMENT REPORT

MARCH 23, 2023

• CHSL 2022 ACCOMPLISHMENTS

> TCRT 1300

- Addressed Numerous Maintenance Issues Without Impacting Schedules
- Rewired Heater Circuits to Balance Load on All Circuits
- Upgraded Door Interlock System
- Redesigned and Standardized Brake Shoe Return Springs
- New Brake Shoes (Grey Iron) Ordered
- Created New Design for Trolley Wheel Harp

> TCRT 322

- Upgraded Door Interlock System
- Upgraded Battery Charging System
- Repairing Rusted Portions of Body Exterior

• CHSL 2022 ACCOMPLISHMENTS

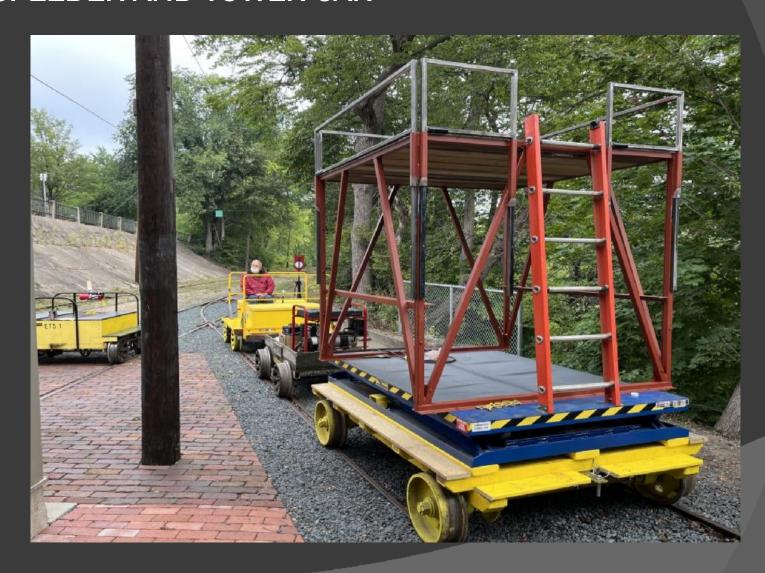
> SPEEDER

- 2.5 HP New Speeder Motor vs. 0.75 HP Old Speeder Motor (@ 36 VDC)
- 333% Power Increase
- Upgraded Drive System
- Can Pull 3 Car "Work Train" Plus 3 Person Crew

> TOWER CAR

- Improved Safety Rails for Personnel Working on Overhead
- Uses Scissors Lift to Raise Top Platform
- Upgraded Access to Top Platform
- Old Tower Car Sold to Capital City Trolley Museum

NEW SPEEDER AND TOWER CAR



O CHSL 2022 ACCOMPLISHMENTS

- TCRT 1239
 - Completed Back-Dating and Standardization of Car to 1920's Era Appearance
 - Replica Baker Heater Installed in Motorman's Area
 - Upgraded Interior Lights to "Edison" Style LED's
 - All Parts Fabricated for New Trucks to Duplicate Look of Original Baldwin #5 Trucks
 - Four GE-241 B Motors Rebuilt for Use on New Trucks
 - Starting Build of First Replacement Truck

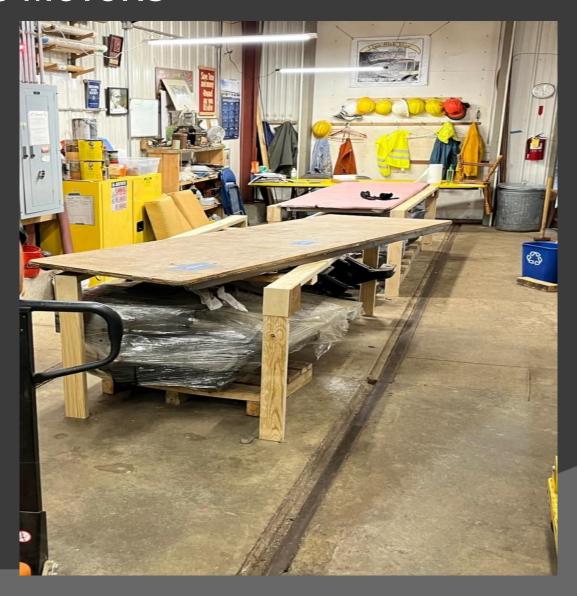
1239 ORIGINAL TRUCK FRAME



1239 NEW TRUCK FRAME INITIAL WELDING



NEW 1239 MOTORS



• ESL 2022 ACCOMPLISHMENTS

> DSR 265

- Refurbished/Upgraded Door Operator Mechanism
- Upgraded Rear Brake Controller & Switch Mechanisms
- Supported 100% of All ESL Regular Operations in 2022.

> DSR 78

- Completely Rewired, Updated, and Improved "A" End Controller
- Improved Shut off Contacts on Both Controllers
- Repainted Car Roof Canvas (2 Coats)
- Improved Ditch Light Mounting System
- Upgraded Battery Charging System

• ESL 2022 ACCOMPLISHMENTS

- MVPS (WINONA) 10
 - GE-800 Motor Rebuild in Progress. Expect May Delivery to ESL.
 - Window Bars Sent Out for Powder Coating

MESABA 10

- Cleaned, Lubricated, and Refurbished 2 Japanese Trucks
- Installed Trucks Under Car Body (First Time in 95 Years)
- Cleaned Out Trash and Unwanted Items from Car Body
- Repositioned Car to Prepare for Starting Restoration

MVPS (WINONA) 10 GE-800 ARMATURE REWINDING





MESABA 10 MOVE





MESABA 10 MOVES OUT OF CARBARN



• ESL 2022 ACCOMPLISHMENTS

> TOWER CAR

- Added New Shelving
- Reorganized and Decluttered Existing Materials on Car