



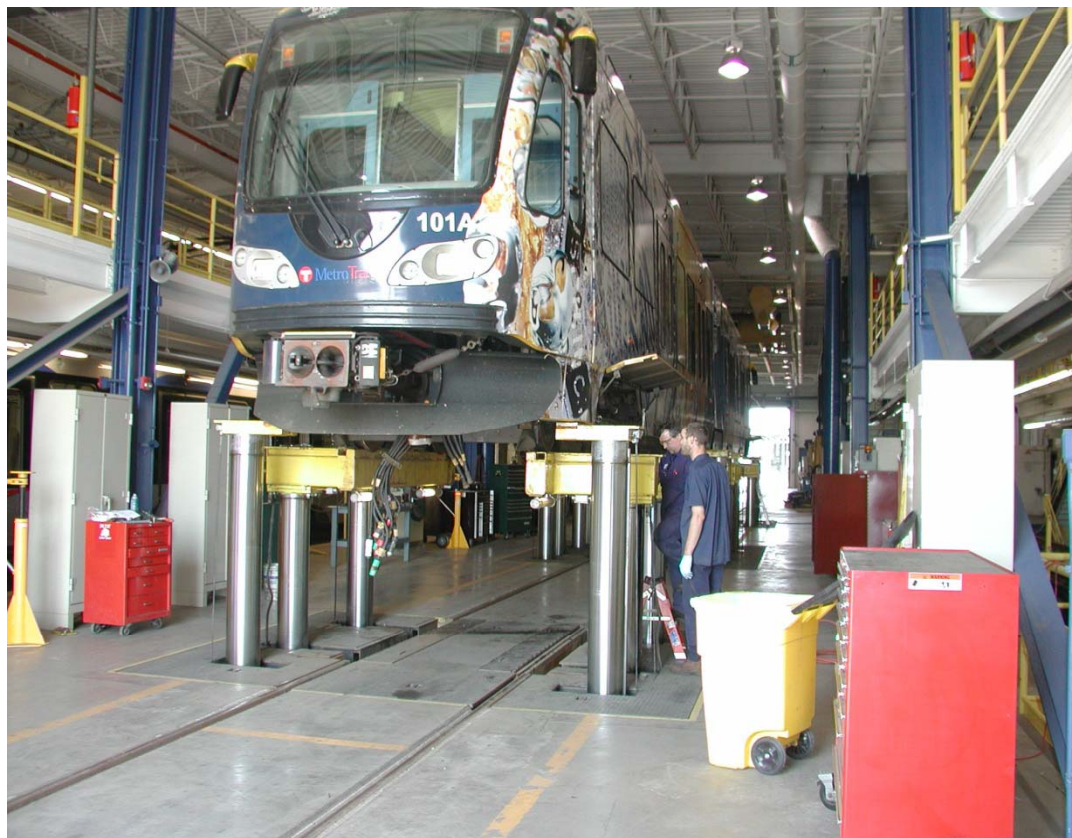
HLRT Overhaul Shop Progress Report

Presented by
Gene Sheldon
Manager Rail Vehicle Maintenance

Date: April 23, 2012



The Overhaul Program began on September 11, 2009 with LRV 101 as the first car completed





Overhauled Components



Pantograph

Power Truck



Overhauled Components

Axle Assembly

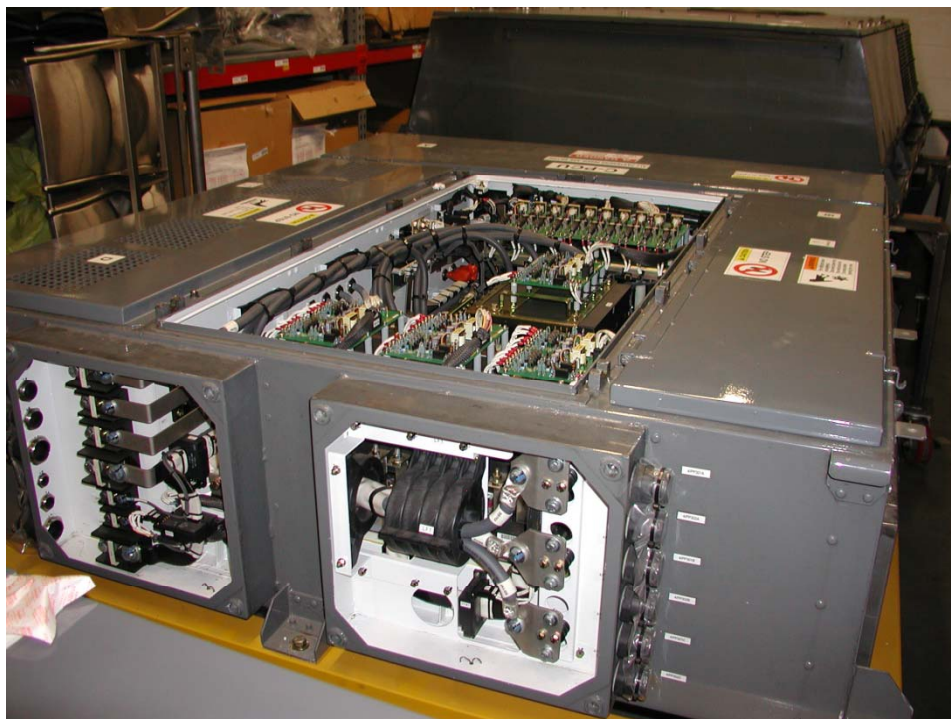


Center Truck



Overhauled Components

Heating Ventilating A/C Unit (HVAC)

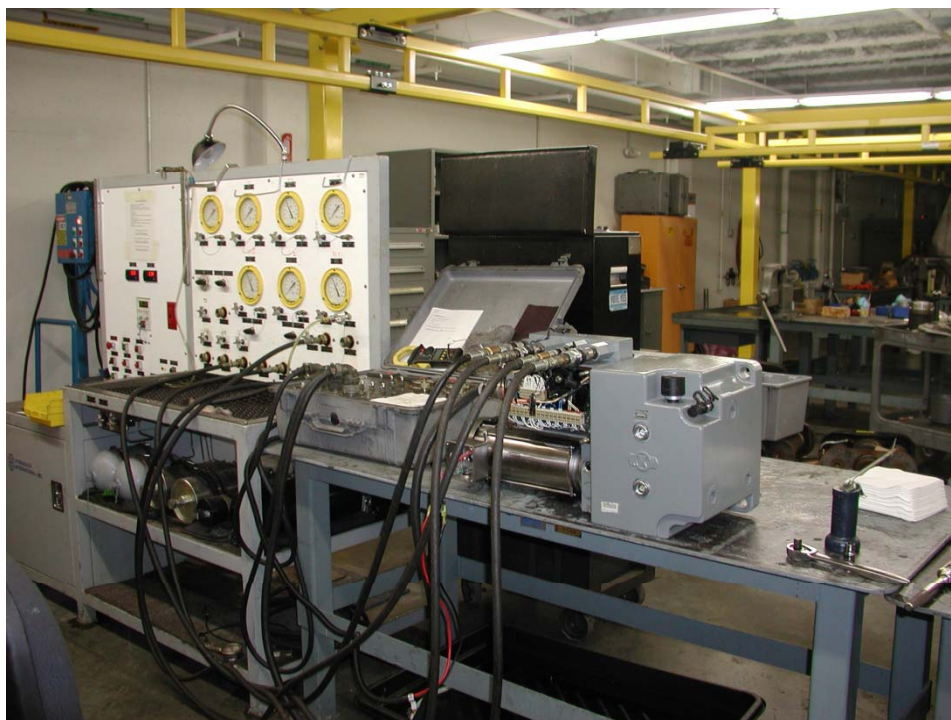


Combined Power Control Unit (CPCU)



Overhauled Components

Master Controller



Electronic Hydraulic Control Unit (EHU)



Overhauled Components



Couplers

Brake Calipers

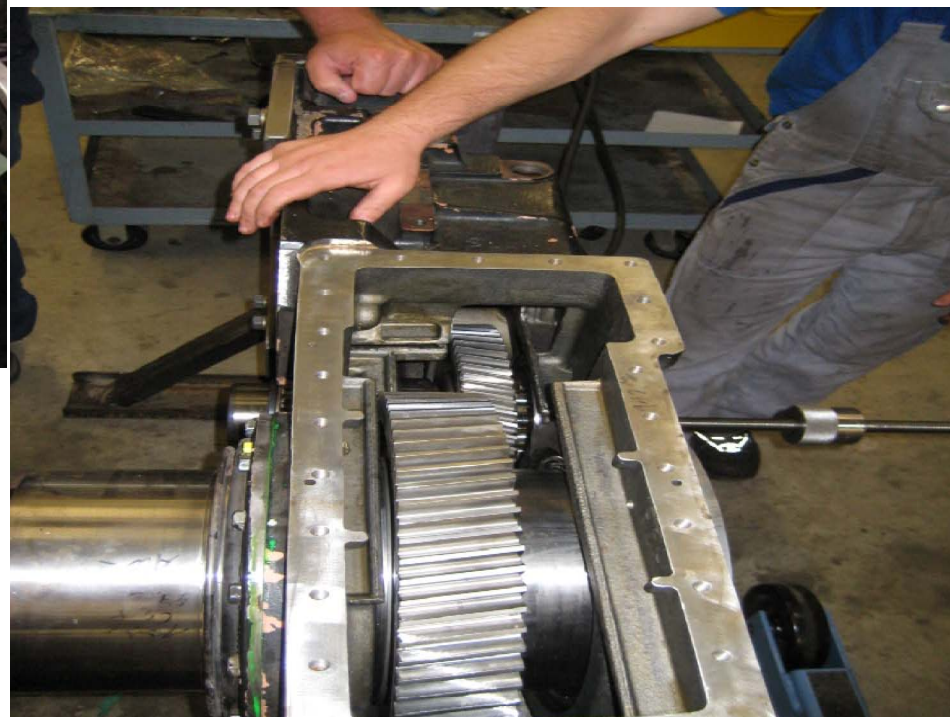


Overhauled Components

Voith Gear Box Didn't need to be overhaul till 800,000 miles



Toshiba Traction Motor
End Bear and Armatures



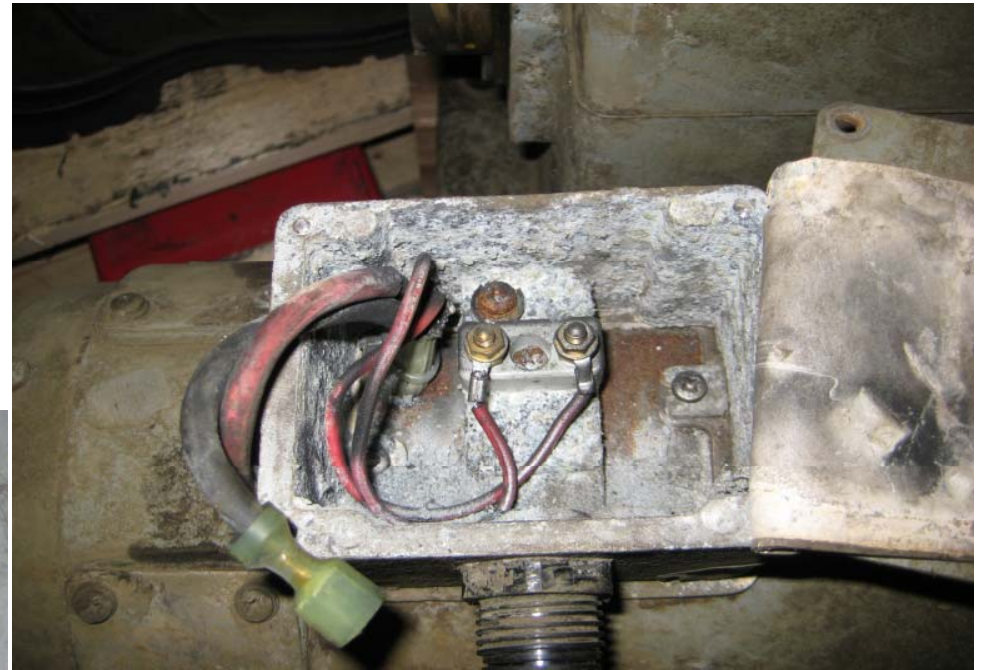
Special tooling was developed as required



50 Ton Axle Press
For the Removal of
The Axle Bearings

Rust and Corrosion

Motor Armature



Pump Motor
Electrical Box
And Connectors

Rust and Corrosion Issues

Axle Bearings



Axle Bearing Housing

Parts Sourcing





2009

2010

2011

2012

LRV101

LRV111

LRV102

LRV121

LRV113

LRV122

LRV106

LRV123

LRV107

LRV117

LRV114

LRV124

LRV110

LRV105

LRV112

LRV103

LRV108

LRV118

LRV104

LRV116

LRV115

LRV120

LRV119

LRV109

LRV125

Twenty six (26) LRV's completed to date

LRV126

LRV127

Overhaul started on September 11, 2009

Projected completion date for Ovh1 May 2012



**Please ask any questions
or concerns that you may have.**

