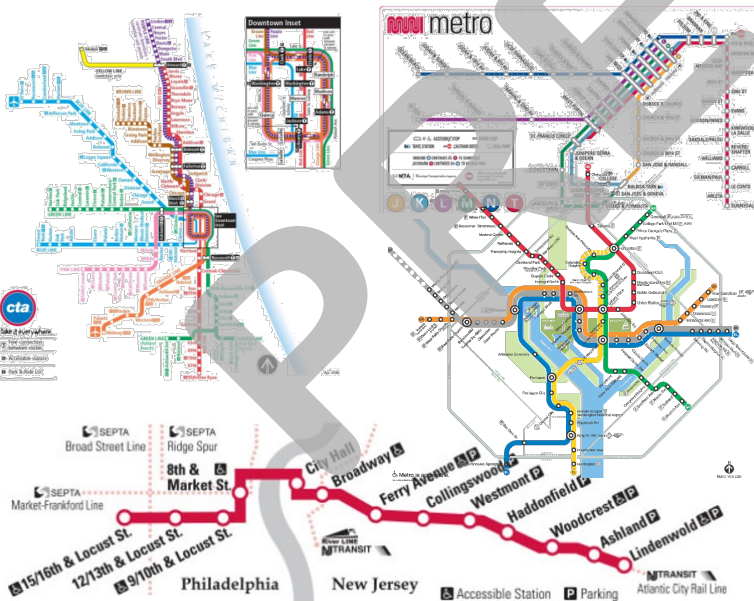


# Troubleshooting Truck Systems

Course 302



## PARTICIPANT GUIDE

 RAIL CAR TRAINING CONSORTIUM

Truck Systems

Troubleshooting

Course 302

SME REVIEW

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# Participant Guide

April 2019

Rail Car Training Consortium

## Table of Contents

Table of Contents .....	i
Table of Figures .....	i

### MODULE 1

<i>Troubleshooting Truck Systems</i> .....	<b>1</b>
1-1 Overview to Troubleshooting Truck Systems .....	2
1-2 Poor Ride Quality .....	5
1-3 Air and Oil Leaks .....	9
1-4 Ground Brushes .....	10
1-5 Carbody Leaning and Incorrect Car Height .....	11
1-6 Course Summary .....	12

## Table of Figures

Figure 1 Symptoms and Probable Causes of Rail Vehicle Trucks .....	3
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# MODULE 1

## *Troubleshooting Truck Systems*

### Outline

- 1-1 Overview**
- 1-2 Poor Ride Quality**
- 1-3 Air and Oil Leaks**
- 1-4 Ground Brushes**
- 1-5 Carbody Leaning and Incorrect Car Height**
- 1-6 Summary**

### Outcome and Objectives

This module examines probable causes of rough, jolting, and noisy rides as well as other symptoms reported by operators and passengers. Following the completion of this module, the participant should be able to complete the objectives with an accuracy of 75% or greater:

- Assess probable causes and resolutions of the following symptoms of the railcar truck:
  - Poor ride quality.
  - Air and oil leaks.
  - Ground brushes.
  - Carbody leaning and incorrect car height
- Identify steps to troubleshoot symptoms.

### Key Terms

- Buff Force
- Draft Force

### Abbreviations

OEM      Original Equipment Manufacturer

Troubleshooting Rough Rides			
SYMPTOM	PROBABLE CAUSE	TESTS AND CHECKS	CORRECTIVE ACTION
Rough <b>vertical</b> ride or excessive carbody movement.	Defective or loose vertical damper.	Inspect vertical damper for loose mounting bolts, worn flexible bushings, and oil leakage.	Replace vertical damper if damaged.
	Defective frame support pad assemblies.	Inspect frame support pad assemblies for damage.	Replace frame support pad assemblies as required.
	Defective secondary suspension springs.	Inspect for cracks or other damage.	Replace faulty secondary suspension springs.
	Defective layer spring.	Inspect for damage.	Replace fault layer springs.
	Flat spot on wheel.	Check braking system for defects.	Repair (reprofile) or replace wheel as required.
		Inspect journal bearing and bearing housing for defects.	Replace journal bearing if damaged.
		Inspect wheel for defects.	Repair (reprofile) or replace wheel as required.
	Misadjusted up or lifting stop.	Verify adjustment.	Adjust to specs.
Rough ride, general.	Air suspension linkage loose or disconnected.  Air leak or supply issue.	Visually check for leaks. Perform audible checks.	Reinstall or replace related components. Adjust air supply to OEM specifications.
Noticeable jolting to carbody each time buff and draft forces are applied.	Defective or worn truck bolster bushing.	Inspect truck bolster bushing.	Replace truck bolster bushing if damaged.

## 1-6 COURSE SUMMARY

Troubleshooting is an integral part of maintenance work on the rail vehicle. This course presented some common troubleshooting scenarios that the rail car technician can analyze and apply to similar situations at their transportation agency. The learning applications in this module helped the participant enhance the approach to troubleshooting common reported issues with the rail vehicle's trucks and helped identify likely causes and list the respective steps to resolve the issues.

PREVIEW