

Registration Form
Name _____
Title _____
Company _____
Address _____
City _____
State/Province _____
Zip/Postal
Code _____
Phone _____
Email _____

Registration Amount -- \$495

Registration form cannot be accepted without accompanying payment either via online registration or in the form of a check. If registering by mail, send completed form and check in U.S. funds to AARS, PO Box 200, LaFox, IL 60147. All reservations must be received in the AARS office by July 15, 2017. After that date, reservations will be accepted on a first-come, first- served basis. All cancellations are subject to a \$75 service charge.

Hotel Information: The seminar will be held at the Chase Park Plaza in St. Louis, MO. Please make your hotel reservations directly with the hotel at the phone number listed below. The special room rate for AARS Derailment Investigation Seminar attendees is \$172/ night. To access this rate, please mention your participation in the AARS seminar. The hotel will begin accepting reservations after October 30, 2016. 212 Kingshighway Blvd, St. Louis, MO **(314) 633-3000**

Who should attend:
Railroad Managers
Superintendents
Trainmasters
Field Engineers
Mechanical Officers
Railway Engineers
Local, State & Federal Officials (FRA, DOT)
Industrial Plant Managers
Engineering Consultants
Environmental Specialists

Why attend:
By attending the AARS Derailment Seminar, participants will gain:

- A working knowledge of basic track structure, performance, causes of common problems;
- Examination of detail on axle loads, traffic density, operating speeds;
- Optimal learning potential with presentations on railroad turnouts, crossings with details handling spots;
- More effective on the job performance, using course-provided critical information;
- Practical answers to your basic questions about yard derailments;
- The latest information about methods and technologies used in current railroading practice and applicable rules, regulations, and standards.

The American Association of Railroad Superintendents

Presents

Derailment Investigation

By

**Mr. Gary Wolf,
Wolf Railway Consulting**

July 25-26, 2017
Register online at
www.supt.org

Tuesday, July 25

9:30 Introduction

Course Objectives and Goals
What is a Derailment?
Derailment Myths and
Misconceptions
Industry Statistics
L/V Ratio
Wheel Climb Factors
Rail Rollover Factors

11:00 Break

11:15 Track and Engineering Issues

Elements and Basics of the
Track Structure
Rail Identification
Rail Wear and Effect on
Rollover Potential
Broken Rail Derailments
Fasteners (Spikes and Clips)
Crossties, Differential Plate
Cutting

1:00 Lunch

2:00 pm Continuation of Track Issues

Ballast and Subgrade
Rail Anchors
Track Buckle Derailments
Curve Superelevations Issues
Switches & Turnouts (Wedges)

3:30 Break

3:45 Continuation of Track Issues

Rail Lubrication
Track Crosslevel and Twist
FRA Track Safety Standards –
Gage, Crosslevel,
Elevations, Horizontal
Alignment, Recording
And Plotting Measure-
ments

5:30 Mechanical Issues

Car and Casting Identification
The Anatomy of the Three Piece
Truck
Side Frame Bottoms
Purpose of Friction Dampers
(Wedges)

6:00 Adjourn

Wednesday, July 26

8:00 Continuation of Mechanical Issues

Wedge Rise, Harmonic Rock and Roll
Vertical Bounce, Track Hunting,
Curving Mechanics and the
Warped Truck

10:00 Break

10:15 Continuation of Mechanical Issues

Conventional Side Bearings
Influence of Tight Side Bearings
On Derailments
Constant Contact Side Bearings
Centerbowl/Centerplate Issues
Stiff Truck Derailments
New Car Syndrome

12:00 Lunch

1:00 pm Continuation of Mechanical Issues

Frame Bracing Issues
Wheels:
Thin/Vertical Flange, Tread
Wear, Wheel Profile Issues,
Wheel Flange Angle, Hollow
Worn Wheels, Wheel Tapes

Back-to-Back Measurements
Bearings and Bearing Adapters
Roller Bearing Failure Derailments
Mechanical Inspections Forms and Data

2:00 Track/Train Dynamic Issues

Air Brake Issues, Emergencies and UDE's
Locomotive Independent Brake Issues
How to read and interpret Event Recorder
Data

Excessive Draft Force, Stringlining
Excessive Buff Force, Jackknifing, Rail Roll
Over

Tractive Effort
Dynamic Breaking Effort
Slack Action Derailments
Train Make-Up and Car Placements

3:00 Break

3:15 Human Factor Causes

Statistics and Typical Causes
A Systematic Approach to Human Factor
Derailments
Team Approaches to Prevention of
Human Factor Causes

Wednesday continued

4:00 Site Investigation Techniques (The Derailment Dozen)

Overview – 12 Steps to a
Successful

- Investigation
- Safety at Site
 - D&A Testing
 - Train Documentation
 - Crew Interview
 - Photo/Videos
 - Metallurgical Specimen
Handling
 - Event Recorder Data
 - Finding the POD
 - Using Rail Marks as
Investigative
Tools
 - Finding First Wheel to Derail
 - Car/Mechanical Measurements
 - Track/Engineering
Measurements

5:00 Adjourn

**Presented by:
The American
Association of Railroad
Superintendents**

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